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ABSTRACT

This report focuses on a study that examined whether the implementation of the sex equity provision of the 1976 Vocational Education Amendments has resulted in equitable access to and benefit from the nation's vocational education system by women and men, girls and boys. The study focused on such issues as funding mechanisms; federal and state roles; local implementation; special needs of women; state sex equity coordinations; state plans, reports, and public hearings; administrators, counselors, and instructors; curricula and texts; and related legislation. Data in general showed that women have taken a greater part in vocational education, especially in sex-mixed programs, and less noticeably in non-traditional programs, than they did before the legislation was enacted. The report is organized in the following five sections by the major phases of the study: (1) an introduction to the issues involved and the methodology of the study; (2) an analysis of state reports and national and state enrollment data; (3) an analysis of recent research studies conducted to identify the impact of vocational education on women and men; (4) a description of the two public hearings conducted for this study and a summary of the issues raised; and (5) appendixes which contain analyses of state reports and enrollment data, a matrix of the contents of state plans, and other details of the study. (KC)

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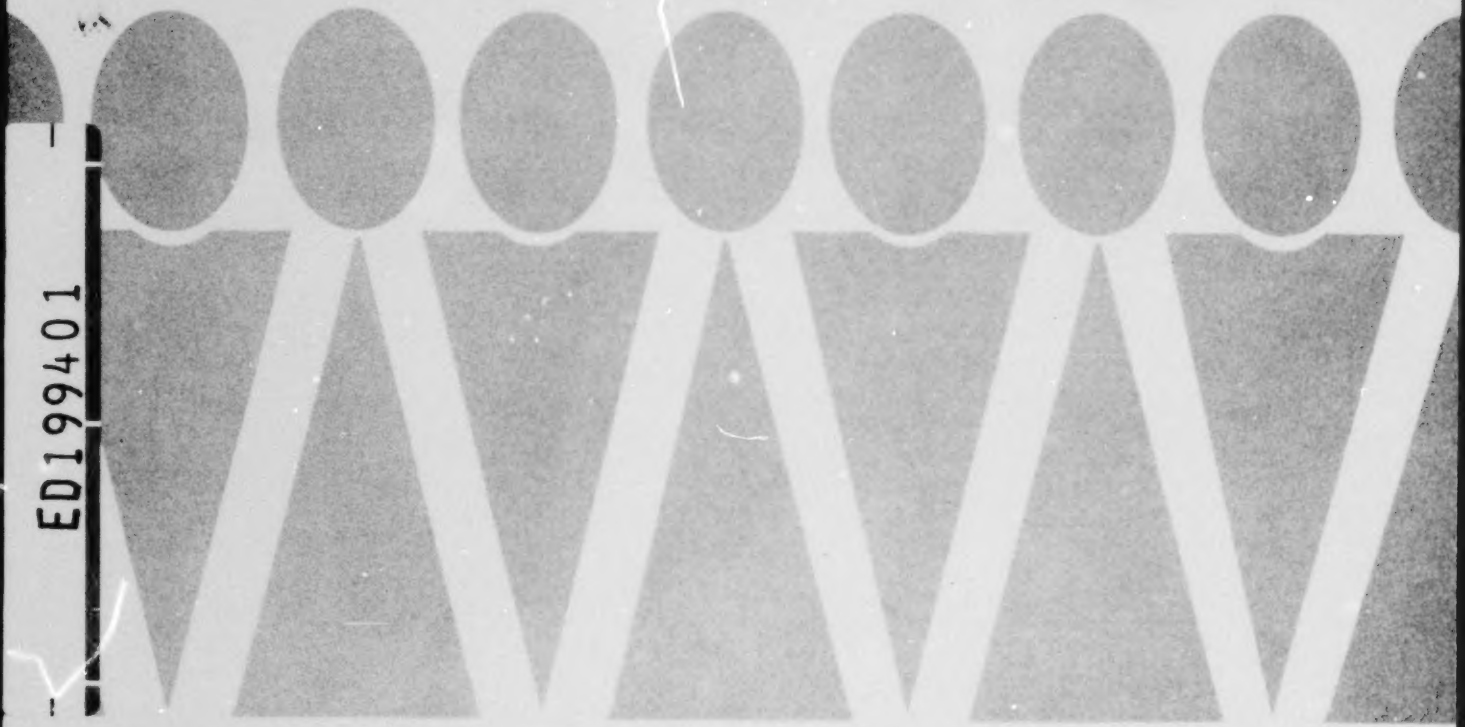

# INCREASING SEX EQUITY

## THE IMPACT OF THE 1976 VOCATIONAL EDUCATION AMENDMENTS ON SEX EQUITY IN VOCATIONAL EDUCATION

Report of

The National Advisory Council
On Vocational Education

and

The National Advisory Council
On Women's Educational Programs

by

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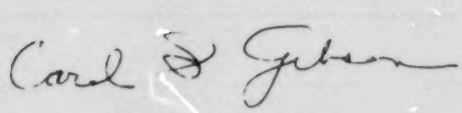
# PREFACE

The National Advisory Council on Vocational Education and the National Advisory Council on Women's Educational Programs are pleased to present this report of our joint study of the implementation of the sex equity provisions of the 1976 Vocational Education Amendments. The report culminates a fruitful, three year effort of the two Councils to provide both policy and practical support to those responsible for actually carrying out these provisions.

As we submit this report at the close of 1980, the economic implications of much of its contents seem especially compelling. Passage of the 1976 Amendments was spurred in part by testimony regarding the inequality of women's employment patterns. Such concerns led to the special emphasis in the 1976 reauthorization on positive action to eliminate sex bias and stereotyping in order to maximize access to the full benefits of this nation's vocational education system. Now, as another reauthorization approaches, the National Advisory Council on Economic Opportunity reports that the increase of poverty in this country in recent years has been almost entirely among female-headed households. Increasing attention to the economic strength of this country is also leading to a renewed focus on full utilization of the skills of all its citizens. We hope this report will stimulate others to join us in a continuing analysis of these issues, in preparation for the reauthorization, and in the ongoing improvement of sex equity policy and practice in the vocational education system.

We would especially like to acknowledge the two committees which provided invaluable direction to the project which culminated in this report--the NACVE Special Populations Committee, co-chaired by Karen Fenton and Lawrence Hawkins and the NACWEP Federal Policies, Practices, and Programs Committee, chaired by Ellen Hoffman.

Both Councils also extend special thanks to those who testified at the two public hearings conducted for this study, as well as to those countless others who assisted in the organization of the hearings and other phases of the study.



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National Advisory Council
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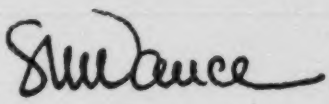

Susan Margaret Vance, Chair
National Advisory Council
on Women's Educational Programs

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# EXECUTIVE SUMMARY

The National Advisory Council on Vocational Education and the National Advisory Council on Women's Educational Programs initiated this joint study of the sex equity provisions of the 1976 Vocational Education Amendments to examine whether their implementation had resulted in equitable access to and benefit from the nation's vocational education system by women and men, girls and boys.

The study results will assist the Councils in providing, under their respective legislative mandates, substantive comments and recommendations to the Secretary of Education, the Congress, and the President regarding the upcoming reauthorization of this legislation; they should also prove useful to educators, students, and citizens involved in vocational education.

The various phases of the study focused on such crosscutting issues as funding mechanisms; Federal and state roles; local implementation; special needs of women; state Sex Equity Coordinators; State Plans, Reports, and public hearings; administrators, counselors, and instructors; curricula and texts; and related legislation. The study included a meeting with Sex Equity Coordinators; preliminary interviews and a subsequent forum with interested agencies and organizations to discuss the critical issues; two regional public hearings attended by persons from 21 states; detailed analysis of enrollment data and various state plans and reports from 15 selected states (representing 55% of all vocational enrollments); and a review of recent research relevant to the study. The major findings of the study are summarized below.

## Review of Recent Research

- Those schools putting the most effort into various activities to further equity were also those with the highest Non-traditional

enrollment of women. Furthermore, the more attention the state paid to what the school was doing, the more the school tended to do.

- There must be considerably more emphasis at all levels on activities designed to overcome inequities in addition to the monitoring and reviewing designed to discover such inequities.

- Successful sex equity programs established a liaison with potential employers, provided participants with support services and orientation to the program, instituted comprehensive evaluation, and employed competent and dedicated staff. More identification and dissemination of such programs is needed.

- There have been significantly greater increases in adult women's enrollment in Non-traditional programs through post-secondary and adult education than in high school women's enrollment in Non-traditional programs.

- As of 1975, the vocational expectations and occupational choices of working class women were conspicuously absent from research literature, despite the fact that most are employed a large part of their lives.

State Plan and Reports

- Most of the selected State Plans contained general statements indicating good intentions without defining specific methods for carrying out these intentions.

- Although the legislation mandates that women knowledgeable in sex equity issues be represented on State Advisory Councils for Vocational Education (SACVEs), and in addition that minority women be represented, information available in state reports made it difficult to discern if these mandates were followed.

- Attempts by most of the states to provide financial incentives for efforts to address sex equity were diverse but relatively minor and often hard to identify within broader projects.

- Comparison of State Plans with Accountability Reports showed that many states did not expend the full $50,000 specifically allocated to the work of the Sex Equity Coordinator and there was no evidence that unexpended balances were carried over to the following years' budgets.

- Although a large number of the states committed funds to displaced homemaker services, there was no evidence that these funds were being used as was legislatively mandated.

- Most states reported that they were monitoring and reviewing for sex equity, but there was little information regarding what happened once plans, proposals, and activities were reviewed.

- Several states reported that they encouraged the entire state staff to become aware of and assume responsibility for sex equity activities, but the specific activities which resulted were not reported.

- Within all of the selected states, the major effort of Sex Equity Coordinators, in addition to monitoring and reviewing, was conducting workshops and seminars and disseminating related information.

- In most cases the State Plan responded to the requirements of the Federal regulations, however, in only a few cases did the state attempt to go further and define its problems or offer a system or method for eliminating sex bias at the local level.

- Many SACVEs or participants at public hearings on State Plans recommended that the state should be funding programs to deal with sex equity issues. Nevertheless, only a few states allocated additional funds for programs, and many states that allocated funds did not expend them.

- States rarely appeared to have been influenced by other recommendations from SACVEs or from the State Plan public hearings.

- The impact of the Bureau of Occupational and Adult Education's Management Evaluation Reviews for Compliance and Quality and staff reports on the State Plans was difficult to assess.

Enrollment Data (1972-1978)

- National enrollments in all occupational training areas increased by 44%, with an influx of over three million additional students. The enrollment increase was greater for women than for men. Women increased by 1.8 million (60% more than their enrollment in 1972), while men increased by 1.4 million (32% more than their enrollment in 1972.)

- While the actual number of women enrolled nationally in Traditional vocational programs increased by 723,700, the percent (i.e., concentration) of all women vocational students who were in Traditional programs decreased by 9 points, from 65% to 56%.

- Women made greater enrollment gains in Mixed programs than in Non-traditional programs. The number of women in Mixed programs increased by 756,500 (up 5%) while the number in Non-traditional programs increased by 312,300 (up 4%).

- Increases in women's enrollment in Non-traditional programs were greater in Technical and in Agricultural programs than in Trade and Industrial programs.

- Percent increases in women's enrollment in Non-traditional Trade and Industrial programs occurred in courses without a strong sex role image, such as drafting, law enforcement, and graphic arts, rather than in courses with a strong male role image such as construction, police science, and machine shop.

- In the 15 states studied, there were greater increases in the percent of women enrolled in Non-traditional programs between 1972 and 1976 than between 1976 and 1978, even considering that the first time period is twice as long as the second.

- The amount and type of detail provided in the Plans of the 15 states regarding implementation of the sex equity provisions varied and sometimes correlated with improved enrollment patterns for women. Greatest increases in enrollment of women in Non-traditional programs occurred in states where planning and monitoring systems were established to meet equity goals, where funds were committed to establish equity programs, and where efforts were made to utilize the entire state staff to address sex equity issues.

Public Hearings

- Negative attitudes about non-traditional training choices and expansion of male/female roles are still prevalent in state agencies, school districts, and communities, and constitute a major barrier to equity.

- More focus is needed on pre-service and in-service training of vocational education staff, especially to get more women into administrative positions, and men and women into non-traditional teaching positions.

- There is a crucial need for adequate, affordable childcare services.

- Transportation and other supportive services are often critical, especially to poor or rural women's participation in a vocational program.

- Witnesses felt that the law is too vague or lenient in the areas of childcare, displaced homemakers, curriculum revision, training and personnel development, guidance and counseling, and assistance to women in preparing for and obtaining non-traditional employment.

- The role of the Sex Equity Coordinator is viewed as essential to the task of achieving equity.

- The across-the-board funding of $50,000 is not sufficient in every state for full-time sex equity personnel and many Coordinators have been unable to secure additional funds to implement programs.

- Sex equity must be viewed as a human issue that affects men as well as women.

- Minority women need supportive services, programs which address their cultural differences, and outreach efforts to change the negative image of vocational education in their communities.

- Attempts by persons outside of the vocational education system to monitor and review State Plans and testify at the mandated public hearings had shown mixed results, and often proved extremely frustrating.

- More sex-fair textbooks and materials infused into the curricula are needed to expand students' views of their potential career options and expose them to women and men in non-traditional jobs.

- Exploratory vocational programs at the junior high school level help students make better career decisions in high school, when peer presure to conform to traditional sex roles is strongest.

- More emphasis on sex equity in postsecondary vocational education is needed to meet the needs of those adult women who make career decisions later in life than men.

- The problem of sexual harassment is increasing as more women enter non-traditional classes.

- Broad legislative coordination with other youth, education, and employment programs is needed in order to achieve sex equity in vocational education.

# I. INTRODUCTION

In September 1979 the National Advisory Council on Vocational Education (NACVE) and the National Advisory Council on Women's Educational Programs (NACWEP) initiated a joint study of the impact of the Vocational Education Amendments of 1976 on sex equity. The Advisory Councils' Joint Task Force on Sex Equity, concerned that vocational education be more accessible in order to prepare women and men, girls and boys for employment, sought to examine whether the sex equity mandates of the legislation had resulted in equal access.

The study is timely, since the Federal vocational education legislative agenda calls for Congressional reauthorization activities during the coming year. The two National Advisory Councils, under their respective legislative mandates, are responsible for providing substantive comments and recommendations to the U.S. Department of Education, the Congress, and the President, regarding education programs -- NACVE for vocational education, including the provision of sex equity; NACWEP for education programs affecting women, including vocational education. Both Councils likewise share a particular concern for the needs of racial and ethnic minority women who often suffer double discrimination.

Through this study, the NACVE-NACWEP Joint Task Force on Sex Equity provides the respective Councils with information regarding the effects of the 1976 legislative provisions intended to improve sex equity in vocational education. The information contained in this study report may assist the Councils in determining which sex equity provisions of the legislation should be reauthorized, modified, or deleted, and which new provisions might be added during the reauthorization in order to meet previously unaddressed issues.

The study report may be of interest to others beyond the Councils -- Federal officials concerned with the extent to which the legislation has increased sex equity; state officials seeking a context in which to assess their efforts; local educators and school board members as well

as community organizations and individuals concerned with the ability of vocational education to respond to the need for equitable employment preparation.

## THE LEGISLATION

The 1976 Vocational Education Amendments (VEA '76) were enacted during the Nation's period of greatest growth in women's employment. The inequity of their employment patterns, however, during this growth period became a major concern.

The U.S. Department of Labor projected that between 1975 and 1990 twelve million women would be added to the American labor force, reaching a total of over 48.5 million women.[1] Statistical analyses of the labor force data indicated that unless major changes occurred to prepare women for entering the work force, they would continue to account for 78% of clerical workers, 62% of service workers, 97% of household workers, and 43% of sales workers. Nearly all secretaries in 1976 were women, as were 86% of file clerks, 85% of elementary school teachers and 97% of nurses.[2] Twenty-five percent of all employed women were employed in only five occupations -- elementary school teachers, typists, waitresses, sales clerks, and secretaries --jobs which tend to pay low wages. Over half of all working women clustered in 17 occupations, compared to 63 occupations for the same percentage of men.[3] This extreme occupational segregation is to a large extent responsible for the continuing wage gap which shows year-round, full-time women workers earning less than 3/5 of

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1 Bureau of Labor Statistics, U.S. Department of Labor, U.S. Working Women: A Data Book, 1977.

2 Bureau of Labor Statistics, U.S. Department of Labor, Employment and Earnings, 1976.

3 Waldman, Elizabeth and McEaddy, Beverly J., "Where Women Work -- An Analysis of Industry and Occupations," Monthly Labor Review, May, 1974.

similarly employed men. In short, the economic differences were well documented and spurred Congressional interest in using vocational education as a viable resource in overcoming the inequity.

The numerous programs in vocational education prepare individuals for a wide range of opportunities, many in expanding fields with substantial salary potential. Congress intended the 1976 Amendments to direct efforts toward developing and providing programs to overcome sex bias, sex discrimination and sex stereotyping, and promote equal educational opportunity. The specific provisions are clear:

- Federally assisted state vocational education programs are subject to both Title IX* and VEA '76 mandates to eliminate sex discrimination and stereotyping;

- Advisory Councils on Vocational Education -- National and State -- must have women and minority women members knowledgeable about sex discrimination in employment and training;

- Each state must hire full-time sex equity personnel; duties of that person are clearly outlined and $50,000 of Federal funds are provided for this purpose.

- State Plans must describe in detail how equal access for both sexes to vocational education will be ensured;

- Public hearings on State Plans must be held and involve a wide range of agencies and individuals in developing each state's vocational education goals and programs.

- Displaced homemakers and other special groups -- men and women who are single heads of household, homemakers seeking employment.

* Title IX of the Education Amendments of 1972 prohibits sex discrimination in any education program or activity receiving Federal financial assistance.

part-time workers seeking full-time jobs, and persons seeking non-traditional jobs -- must have opportunity for program participation;

Support services, day care services, vocational guidance and counseling, as well as grants to overcome sex bias, may be funded.

The 1976 Amendments provided the impetus to create change; this was the first time that the need for equal access to vocational education and job training, particularly for women and girls, had been specifically addressed by any Federal program legislation.

## THE POTENTIAL FOR IMPACT

Federal involvement in vocational education as a means of preparing persons for employment began prior to the turn of the century, and was enlarged by the Smith-Hughes Act in 1917, which strengthened state and local vocational education in agriculture, home economics, and trade and industrial training. Subsequent Federal legislation expanded vocational education programs and with the 1961 Manpower Development and Training Act began a Federal-state-local relationship between vocational education and employment and training programs. The Vocational Education Act of 1963 provided substantial increases in Federal appropriations for vocational education and initiated the concept of State Plans, the annual descriptions of programs to be funded through states to local school systems.

While these early Federal involvements had served as incentives to building delivery systems and programs, the 1968 Amendments to the 1963 Act increased attention to the social aspects of education and to specific populations of students. National and State Advisory Councils on Vocational Education were established to provide information to Federal and state legislators and officials on the impact of national priorities to serve persons with academic, socio-economic, and other disadvantages; on programs for persons with handicaps; and on research and development of exemplary and demonstration programs. The Federal legislation provided

catalytic funds, yet vocational education is primarily a state and local system -- Federal vocational education expenditures are matched on an average of 1:9 by states and localities.

Related legislation, including the Civil Rights Act, Women's Educational Equity Act, and the Comprehensive Employment and Training Act, has also affected the priorities and programming in vocational education; however, this impact, as well as that of the 1976 Amendments, filters through a structure as complex and varied as the states themselves. Federal funds flow by mandate to a sole state agency and are then allocated by formula to local school districts. While the sole state agency is the fiscal agent, it may or may not have administrative responsibility for operation of all the funded programs. A state may have one or two autonomous administrative systems for operating secondary programs and postsecondary programs. Generally the State Board of Education is designated as the sole state agency, but does not administer the postsecondary system.

Some institutions are fully funded by the state, which may have direct authority for program administration. Locally or regionally controlled systems for offering secondary vocational education include: 1) comprehensive high schools which offer vocational and general academic subjects; 2) a system of specialized vocational high schools offering full-time study of both academic and vocational subjects; and 3) area vocational centers which offer vocational education on a shared time basis to high school students from a particular area of residence. At the postsecondary level, one-year certificates and/or two-year associate degrees are granted by community colleges, technical institutes, and four-year colleges which have vocational or technical programs.

Advice, requirements, and recommendations come to the system not only through the Federal legislation and mandated Councils, but also through school districts, school boards, and trade councils interested in specific programs.

The growing national awareness of the need for training for employment, the increase in women's employment and the related financial inequity,

in combination with Federal legislative mandates and incentives, hold the potential for substantial improvement in vocational education. This study considers the extent to which that potential is being achieved.

## THE CONDUCT AND ORGANIZATION OF THE STUDY

The National Advisory Council on Women's Educational Programs, mandated to advise the U.S. Department of Education on matters relative to equal education opportunities for women and make appropriate reports to the President and Congress; and the National Advisory Council on Vocational Education, which provides advice to the President, Congress, and the U.S. Department of Education on administration, regulations, and operation of vocational education programs, contracted with the private, non-profit Institute for Women's Concerns to gather information regarding the impact of the 1976 Amendments.

During the planning and initial phases of the study, issues and concerns were raised, including the following:

- Funding. Should sex equity be considered as an area for specific funding or be incorporated into special needs in general (including handicapped, disadvantaged)? Should the provisions which allow states to determine the proportion of dollars to be spent on supportive services and efforts to reduce sex bias and sex stereotyping be more clearly defined? Should women be targeted as a special population?

- Focus on Sex Equity. The current legislation states throughout the need to eliminate sex discrimination, sex bias, and sex stereotyping. Has this approach been effective or should there be a single section on sex equity? The extent to which there is provision for assuring compliance, the results of mandating positions for women on advisory councils, the impact of State Plan public hearings -- all require evaluation of their effectiveness in meeting the legislative intent.

- Special Needs of Women. The legislation focuses upon equity for both sexes. Should special provisions for women, such as day care, be mandated as opposed to discretionary? Would low income women and single heads of household, women re-entering the labor force, and women exploring or enrolled in occupational areas which have not been traditional for their sex benefit from such provisions?

- Postsecondary Education. Is clarification needed regarding the role of the Sex Equity Coordinator, particularly in states where postsecondary vocational education operates as a system separate from the secondary level position of some Coordinators? Does the recent increase in postsecondary enrollments, particularly among adult women, suggest the need for attention to this level comparable to that at the secondary level?

- Sex Equity Coordinators. Is there a need to study the relationship of the Sex Equity Coordinator to the state's administrative structure, to the requirements of related legislation, to the available support systems, and to the monitoring and compliance position and responsibilities required by the Office for Civil Rights?

- Public Hearing. Is the public hearings system working, i.e. having an impact on sex equity issues addressed in the State Plan? What role should the Federal government play in assuring that State Plans reflect public involvement?

- Administrators, Counselors, and Instructors. Are states exercising their option to provide training and retraining for counselors and instructors to increase their knowledge of new occupation choices, changing sex roles, and increasing opportunities for non-traditional employment? Testing and assessment capacities as well as counseling and instructional methodologies are additional areas to be examined.

- Related Legislation. The extent to which vocational education addresses sex equity issues may or may not be influenced by the implicit or explicit relationships established with other governmental systems, particularly employment and training (CETA) and the Office for Civil Rights. Have the Federal mandated linkages and overlaps in responsibilities reduced sex discrimination, bias, and stereotyping?

These broad issues are interrelated and cross-cutting; they are the issues considered in the organization and conduct of the study. They provided the focus for analyzing data, testimony, and statements from those who have been involved in attempting to influence the vocational education system and from those interested in insuring that vocational education meets its mandate to promote equity for both sexes.

Two regional hearings, attended by persons from 21 states; a meeting with state Sex Equity Coordinators; preliminary interviews and a subsequent forum with interested agencies, organizations, and individuals to discuss issues critical to legislative consideration; and careful analysis of research and data comprised this study effort.

The report cannot provide answers to all of the kinds of questions emanating from the issues above; however, it does present information on many aspects of these issues which will be useful in determining legislative recommendations and future activities.

## FORMAT OF THE REPORT

This report is organized by the major phases of the study:

I. INTRODUCTION

II. ANALYSIS OF STATE REPORTS AND NATIONAL AND STATE ENROLLMENT DATA synthesizes the voluminous material compiled in conducting the study, presents data relevant to issues identified during the course of the project, and summarizes findings from the documentation;

III. ANALYSIS OF RESEARCH STUDIES

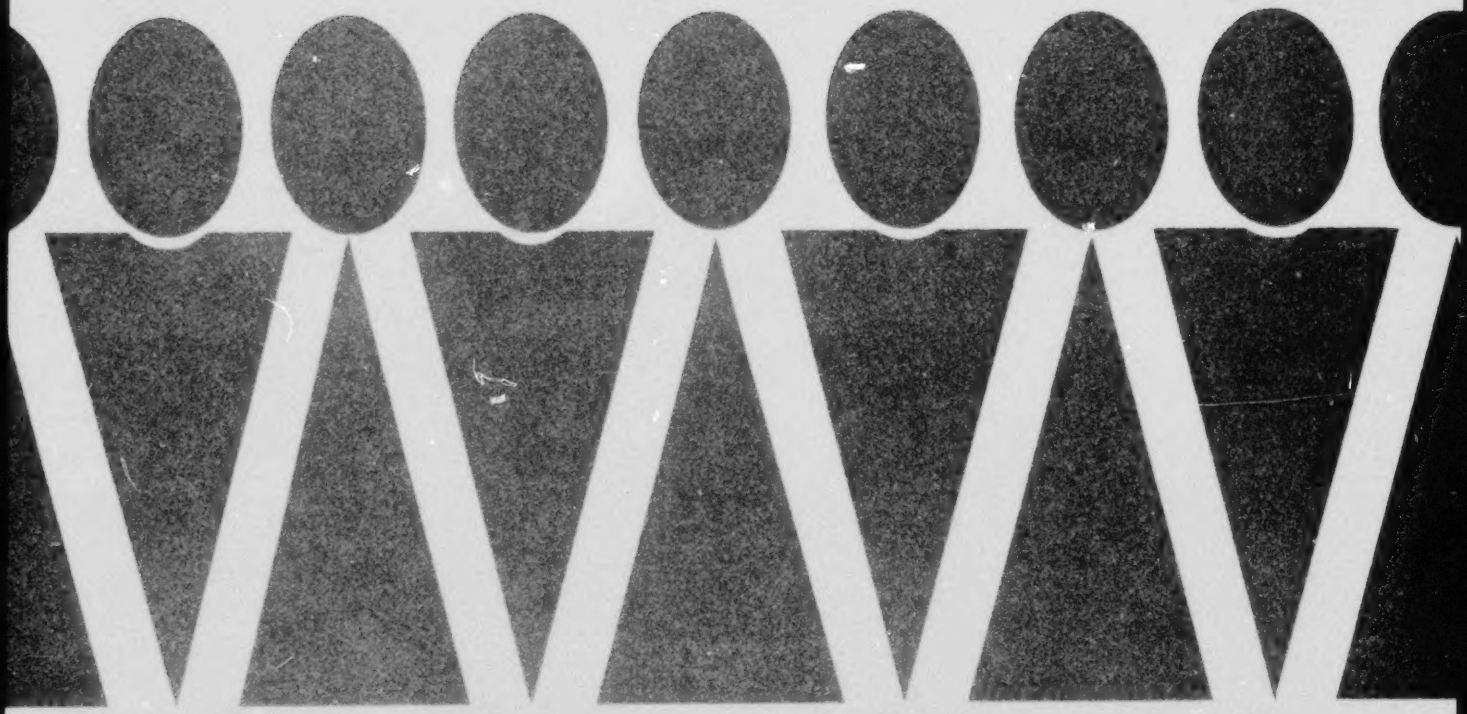
examines recent research conducted to identify the impact of vocational education on women and men;

IV. HEARINGS

describes the two public hearings conducted by the Councils for this study and the content of testimony, and summarizes the issues raised;

V. APPENDICES

contains analyses of individual state reports and enrollment data, a matrix of the contents of State Plans, and other relevant details of the study.



# Analysis of State Reports and National and State Enrollment Data

## II. ANALYSIS OF STATE REPORTS AND NATIONAL AND STATE ENROLLMENT DATA

In conducting this phase of the Councils' study, three sources of information were analyzed:

- The sex equity sections of various plans and reports for the fifteen selected states[1];
- National enrollment data compiled by BOAE for all secondary and postsecondary vocational education students;
- Enrollment data for the fifteen selected states (totalling 55% of all vocational education enrollments).

### ANALYSIS AND FINDINGS FROM STATE REPORTS

The 1980 State Plans and 1978 Accountability Reports of all fifteen selected states were reviewed to determine the type and description of activity related to the sex equity provisions of the legislation. Additionally, State Advisory Council on Vocational Education (SACVE) recommendations and State Plan public hearing comments regarding sex equity were reviewed, as well as the responses of the state office of vocational education to such proposals. Bureau of Occupational and Adult Education (BOAE) staff reports on the State Plans were examined

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[1] The selected states are: Alabama, California, Florida, Georgia, Idaho, Illinois, New Hampshire, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Texas and Wyoming. This group of states includes: (1) the five states included in all four components of the NIE Vocational Education Study; (2) five states where enrollment of women in Non-traditional courses was above the national average in 1972, five states where percent of women enrolled in Non-traditional training was close to the national average, and five states where Non-tradtional enrollment of women was below the national average; (3) nine states which had had a recent MERC/Q; (4) at least one state from each Federal Region except Region VII; and (5) 55% of all national vocational education enrollments. (See Appendices for detailed state data and information.)

for comments dealing with sex equity issues in the selected states as were Management Evaluation Review for Compliance and Equality (MERC/Q) report findings of non-compliance with Federal regulations on sex equity requirements. Finally, State Plans and/or Accountability Reports were reviewed for descriptions of programs and projects funded to eliminate sex bias and for funds allocated and actually expended for sex equity purposes.

Examination of these documents found the following:

- Most of the selected State Plans contained general statements indicating "good intentions" without defining specific methods for carrying out these intentions. For example, in only 4 of the 15 states were LEAs required to provide assurances that programs will be conducted to reduce discrimination and stereotyping; 7 required a plan to eliminate sex discrimination and sex stereotyping; 4 required active recruitment of men and women for non-traditional programs; 3 required submission of an accountability report on the progress of eliminating sex bias; 3 established goals and timetables for eliminating sex bias; 2 required that all vocational institutions have an affirmative action plan, and only one required dissemination of information on administrative jobs and potential women applicants.

- Although the legislation mandates that women knowledgeable in sex equity issues be represented on State Advisory Councils for Vocational Education, and in addition that minority women be represented, information available in state reports made it difficult to discern if these mandates had been followed. The Councils of the states reviewed had one-third or fewer members who were women, but none had fewer than five. Members' knowledge of sex equity issues could not be determined well because in some state reports the Council members were not listed by name and/or by title or affiliation which might indicate experience or level of involvement in the issue of

sex equity. Also, women were not identified in the reports by ethnicity; therefore, it was not possible to determine if minority women were adequately represented on these Councils. For states which did report affiliation, there was a notable absence of women representing community-based organizations.

- Attempts by most of the states to provide financial incentives to address sex equity were diverse but relatively minor and often hard to identify within broader projects. One of the analytic problems was the lack of consistency across the state documents. There was considerable variation in the definition of incentive: Oklahoma used RFPs for model projects, news-releases, films and awards for student exhibitions; Texas gave priority to LEAs which included sex equity as part of their proposal, but sex equity was not a requirement. This latter example placed more responsibility for promoting sex equity in the hands of the LEAs than of the state.

  Alabama allocated $500 for each of 14 model programs in FY 79. Oklahoma allocated $5,000 for model projects, and $5,000 for incentives in FY 80. Ohio planned $42,000 for model projects in FY 78 but spent only $2,000.

  An additional analytic problem was that Federal monies available for program improvements and support services may be used to fund projects for a variety of purposes, to which sex equity was often a mere "add on". It was often virtually impossible to determine from the descriptions of the projects the extent to which the projects or the funding were used for sex equity.

- Comparison of State Plans with Accountability Reports showed that many states did not expend the full $50,000 specifically allocated to work of the Sex Equity Coordinator and there was no evidence that unexpended balances were allocated for the following years' budgets. Only 7 of the 15 states

spent their entire $50,000 in 1977-78, according to a special 1980 BOAE report. None of the other 8 states studied carried over their balance into 1978-79. The discrepancies between funds allocated and funds expended warrant considerable follow-up.

- A large number of the states committed funds to displaced homemaker services, yet there was no evidence that these funds were used as was legislatively mandated. In the states reviewed where displaced homemakers were served, services included counseling, job skills training, and/or job placement. Often, however, displaced homemakers were served not because they have been selected as a target population, but because they happened to be found in the population which received such services. Futhermore, although some of the reviewed state budgets identified displaced homemakers as a targeted group, very little money was spent specifically for this purpose. Approximately one-third of the 15 states projected expending substantial funds for displaced homemaker services, but in fact spent very little. For example, Georgia's projected figure was $98,721, New Hampshire's projected figure was $10,000 and no money was reported as actually spent in either case. Alabama and Oregon did not even show displaced homemakers services as a budget item. Of the states which did actually set aside such funds, approximately 12% of the projected amounts were used. For example: Florida planned to spend $61,240, but accounted for an expenditure of only $6,000; Wyoming projected $40,000, actually spent $10,000; New Mexico projected $61,240, actually spent $15,511; and Texas projected spending $200,000, actually spent $5,739.

Another one-third of the states reviewed planned to provide displaced homemaker services, but they were not operational at that time. Nevertheless, some of these states indicated displaced homemakers as a budget item and actually expended funds in this area.

- Most states reported that they were "monitoring and reviewing" for sex equity, but there was little information regarding what happened once plans, proposals, and activities were reviewed. Although 12 of the 15 selected states reviewed their State Plan for sex equity and 12 included a general commitment in their Plan, only 5 required an evaluation component on each program which the states funded to eliminate sex bias. Of the 15 states, 14 reported, with no detailed explanation of the process, that they reviewed the distribution of grants to assure the needs of women were addressed and that the state office reviewed programs for sex bias.

- Several states reported that they encouraged the entire state staff to become aware of and assume responsibility for sex equity activities, but the specific activities which resulted were not reported.

- The major effort, within all of the selected states, of Sex Equity Coordinators, in addition to monitoring and reviewing, was conducting workshops and seminars, and disseminating related information. Additionally, 3 of the 15 states reported that resource packages were developed to assist the local education agencies in implementing in-service training to eliminate sex stereotyping.

- In most cases the State Plan responded to the requirements of the Federal regulations, however, in only a few cases did the state attempt to go further and define its problems or offer a system or method for eliminating sex bias at the local level. Examples of some attempts were: 7 of the 15 states had established a State Advisory Council on Sex Equity and 4 required Local Advisory Councils to include members aware of problems of sex discrimination and bias. While 14 states provided technical assistance to LEAs, only 3 utilized the results of evaluations and action plans in determining state priorities, 1 monitored complaints, and 2 made recommendations to LEAs on affirmative action. While 12 of the states

selected for review were involved in developing and/or reviewing curriculum, only 2 provided training for curriculum personnel, 5 provided guidelines for curriculum development and review, and 6 had developed sex-fair materials.

- Many SACVEs or participants at public hearings on State Plans recommended that the state should be funding programs to deal with sex equity issues. Nevertheless, only a few states allocated additional funds for programs, and many states that allocated funds did not expend them. Of the total funds allocated for sex equity programs (in addition to the work of the Coordinator) in the selected 15 states, about 40% were expended. An approximate one-third of the states indicated specifically that money had been allocated for grants but not all of that money was actually spent. For example: Idaho allocated $5,000 for sex equity grants and Oklahoma allocated $20,000 but neither reported expenditure of those funds. Texas indicated that $169,133 (out of $628,059 allocated) was used to fund exemplary and innovative programs. Alabama described funding 14 model programs in vocational education but no funds were allocated specifically for sex equity. On the other hand, New Mexico showed a budget allocation of $22,847 and expended the same amount.

- States rarely appeared to have been influenced by recommendations from SACVEs or from the State Plan public hearings. States generally responded that either: (1) they were already doing what is recommended, (2) they could not carry out the recommendation because it is too expensive, or (3) they did not have the state or Federal legislative mandate to address the issue of the recommendation. This was particulary true in response to recommendations to fund day care services. Many states claimed that they could not afford to carry out such functions, or that educational funds in that state could not be expended for social services.

- The impact of the MERC/Q and the BOAE staff reports was difficult to assess. One problem was that most of the states that had a MERC/Q report were small in population, with no or relatively small investments in sex equity activity other than the mandated functions of the Sex Equity Coordinator. Given the format of the MERC/Q, minimal documented attention by a state to each mandated activity resulted in an absence of findings of non-compliance. The format was less involved with evaluating the quality of the efforts documented by the state and their impact at the local level, than with basic compliance.

  Pennsylvania was one heavily populated state for which a MERC/Q report was available. The MERC/Q contained many negative findings regarding sex equity. The state had, however, allocated additional funds for sex equity activities beyond the mandated functions and had undertaken several projects to achieve equity. The MERC/Q format did not accomodate analysis of this additional effort. Additionally, the MERC/Qs were consistent in the questions which were asked of a state but inconsistent in the evidence of compliance which was found acceptable.

  On the other hand, BOAE staff reports did not consistently ask the same questions of all the states, but the comments they did provide tended to address substantive and qualitative issues. Both the MERC/Qs and the BOAE reports require improved performance standards if they are to serve better their intended purposes, including the achievement of sex equity.

## ANALYSIS AND FINDINGS FROM NATIONAL ENROLLMENT DATA

The vocational education enrollment data compiled by the Bureau of Occupational and Adult Education between 1972 and 1978 were analyzed for this study. These years were selected to provide comparable data for the years immediately prior and subsequent to the enactment of the

Education Amendments of 1976.[2] All national enrollment data combine secondary and postsecondary statistics; however, data for the Health and the Technical training area can be considered as representative primarily of postsecondary enrollment data.

For this analysis, a baseline of 1972 enrollments of women students was used to develop categories of Traditional program enrollment, Mixed program enrollment, and Non-traditional program enrollment.[3] (See Appendices for a list of programs classified in each of these categories.)

Analysis of national enrollment data, for secondary and postsecondary students combined, resulted in the following findings:

- Between 1972 and 1978 enrollments in all occupational training areas increased by 44%, with an influx of over three million additional students into vocational education; the enrollment increase was greater for women than for men. Between 1972 and 1978 the enrollment of women in vocational education increased by 1.8 million (60% more than their enrollment in 1972). On the other hand, the enrollment of men in vocational education increased by 1.4 million (32% more than their enrollment in 1972.)

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2 National data for 1979 (1978-79 school year) were not available at the time the analysis was conducted. Additionally, sex designations on enrollment were not collected by BOAE for the years 1973, 1974, and only partial data is available for 1975. In this study, 1976 data for California were obtained from the state's vocational education agency because such data were not included in the BOAE statistical report. The 1978 data reflect one year of implementation of the '76 Amendments.

3 In Traditional programs women comprise over 75% of enrollment; Mixed programs are defined as those in which women comprise 25.1 to 75% of the enrollment; Non-traditional programs are those in which women comprise 25% or less of students enrolled. These same catagories when applied to enrollment of men can be developed to show Traditional, Mixed, and Non-traditional programs for them as well. Thus a program classified in 1972 as Traditional for women would be Non-traditional for male enrollees. Once a program is categorized based on 1972 enrollment, the designation is held constant for purposes of comparison.

- There was considerable variation in the extent to which the increased numbers of students were distributed across the seven occupational training areas and among the categories of Traditional, Mixed, and Non-traditional. For example, in 1972 49% of men students in vocational education were enrolled in Trade and Industrial programs, compared to 51% in 1978. In 1972, 60% of women enrolled in gainful occupational training were participating in Business and Office programs, compared with only 53% of women in 1978. In short, the concentration of men in Trade and Industrial programs (which has traditionally enrolled the largest percentage of men) has increased; the concentration of women in Business and Office programs (which has traditionally enrolled the largest percentage of women students preparing for gainful employment) has decreased.

This later finding above indicates that not only have there been marked changes in the types of programs in which women enroll (increasingly moving to selection of Mixed and Non-traditional programs), but also that such changes are especially significant because of the large increase in actual numbers of women in vocational education. The following analysis, comparing numbers of men and women with the percentages of their participation in Traditional, Mixed and Non-traditional programs, amplifies this point:

- Traditional Programs. The increase of women's enrollment in programs Traditional for women was 723,700, between 1972 and 1978, and men's was 145,400. In 1972, 65% of all women students were enrolled in Traditional programs, this dropped to 60% in 1976 and further to 56% in 1978. The enrollment of men in programs Traditional for women increased by only 1% between 1972 and 1978.

  It is important to recognize that the percentage decrease of women enrolled in programs Traditional for women is

not a decrease in the number of women, but rather a decrease in the percent of all women vocational education students who enrolled in Traditional programs, i.e., the concentration of women in Traditional programs has been reduced.

Mixed Programs. The increase of women in Mixed programs between 1972 and 1978, 756,500, was much greater than the increase of men, 443,200. The percentage of women in Mixed training rose 5 points from 29% to 34% while that of men rose only 3 points from 20% to 23%.

Non-Traditional Programs. The increase between 1972 and 1978 of women's enrollment in programs Non-traditional for women, 312,300, was much greater than men's increase, "145,400, in programs Traditional for women." The percentage of women rose from 6% in 1972 to 10% in 1978. The increase of men's enrollment between 1972 and 1978 in programs Non-traditional for women, 806,800, was the largest rise in any category, but the percentage of men dropped 4 points from 73% to 69%.

The above data indicate that although there was an increase of women participating in programs Non-traditional for women, even greater numbers of women enrolled in Mixed programs. Similarly, while there was a slight increase in the numbers of men enrolling in programs which have been Traditional for women, men had a greater enrollment increase in the Mixed programs, and made the greatest enrollment increase in programs Traditional for men.

Within the increase of women in Non-traditional programs, several other trends exist. First, examination of the occupational training areas indicates that women's increased enrollment in Non-traditional programs has been greater in Technical and in Agriculture programs than in Trade and Industrial, during the period 1972-78. Second, although the national

enrollment data in this study combine secondary and postsecondary vocational education, previous studies have found that there have been significantly greater increases in adult women's enrollment in Non-traditional programs through postsecondary and adult education than in high school women's enrollment in Non-traditional programs.[4] Third, in Trade and Industrial programs that are Non-traditional for women, their enrollment percent increases were in courses without a strong sex role image, such as drafting, law enforcement (as opposed to police science) and graphic arts; rather than in courses that have a strong male role image such as construction, auto mechanics or machine shop. Fourth, there have been increases in actual numbers but not percent of women enrolled in courses that have a practical or hobby connotation, as opposed to one of preparation for employment (e.g. auto mechanics and woodworking for women or consumer and homemaking for men.)

## ANALYSIS AND FINDINGS FROM SELECTED STATE ENROLLMENT DATA

The appendices to this study contain tables of the percentage of women enrolled by Traditional, Mixed, and Non-traditional categories for the years of 1972, 1976, and 1978, within the seven occupational training areas -- Agricultural, Technical, Trade and Industrial, Business and Office, Distributive, Health, and Consumer and Home Economics (Gainful and Non-gainful) -- for each of the 15 selected states, as well as the national percentages. The appendices also contain narrative analyses of these data incorporating enrollment change in the detailed programs where such changes have contributed to the enrollment pattern in the overall training area. These analyses of the fifteen states and the supporting data of related appendices resulted in the following findings:

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[4] Women in Nontraditional Training in Secondary Education, Rj Associates. Arlington, VA, 1978.

A Study of the Factors Influencing the Participation of Women in Nontraditional Occupations in Postsecondary Area Vocational Training Schools, Rj Associates. Arlington, VA, 1977.

- There were substantially greater increases in the percent of women enrolling in Non-traditional programs between 1972 and 1976 than between 1976 and 1978, even considering that the second time period is only half as long as the first.

- Most of the increases in women's enrollment in Non-traditional programs have occurred in Agricultural programs, excluding Agricultural Mechanics, and in the Trade and Industrial programs without a strong sex role image. Even in California which had the greatest increases in the percent of women students enrolled in Non-traditional programs, the increase of women in courses with a strong male role image was still relatively small.

- Although there was a substantial increase between 1972 and 1978 in the percent of women enrolled in Non-traditional Technical programs, the rate of increase leveled off after 1976 in some of the states, and in some cases decreased by 1978.

- A total of 8 of the 15 selected states had increases of less than the national gain (4.1%) of women enrolled in Non-traditional Trade and Industrial programs between 1972 and 1978. Of those 8 states, 6 remained below the national average of women in Non-traditional T&I programs in 1978: Alabama, Georgia, Idaho, New Hampshire, New Mexico, and Ohio. The other 2 states had only minor increases in percent of women enrolled in Non-traditional T&I programs but remained slightly above the national average in 1978: Florida and Oklahoma. Two states had substantial increases in the percent of women enrolled in Non-traditional T&I programs, but continued in 1978 to fall below the national average: Pennsylvania and Texas. Oregon data indicated no increases (-0.3%); however, in 1978 the state was still above the national average percent of women enrolled in Non-traditional T&I programs. New York increased 7.2% between 1972 and 1976; however, the state data reflected a substantial decrease, falling below the national

average, by 1978.[5] Only 3 of the 15 states studied reported marked increases in percent of women enrolled in Non-traditional T&I programs and were above the national average in 1978: Califorinia, Illinois, and Wyoming.

## Commentary

Based upon the data and information compiled during the conduct of this phase of the study, several points appear appropriate for additional comment and attention. The two most important changes for women in vocational education have been:

- The rapid expansion in enrollment of women between 1972 and 1978;

- The shift of women's concentration from Traditional programs to Mixed programs. Although progress was made in the increased enrollment of women in Non-traditional programs, increases were comparatively slight -- the progress has been slow.

There was not necessarily a correlation in the states between an increase in Non-traditional enrollment by women and the sex equity content of the State Plans and Reports. Some states detailing sex equity plans did not show enrollment changes; others with little specificity did have enrollment changes. Where State Plans required goals and timetables, plans from the LEAs for increasing sex equity, and specific assurances from the LEAs that such plans will be achieved, there appears to have been a concomitant increase in the number of women enrolled in Non-traditional programs, i.e., there were indications that there was progress in sex equity.

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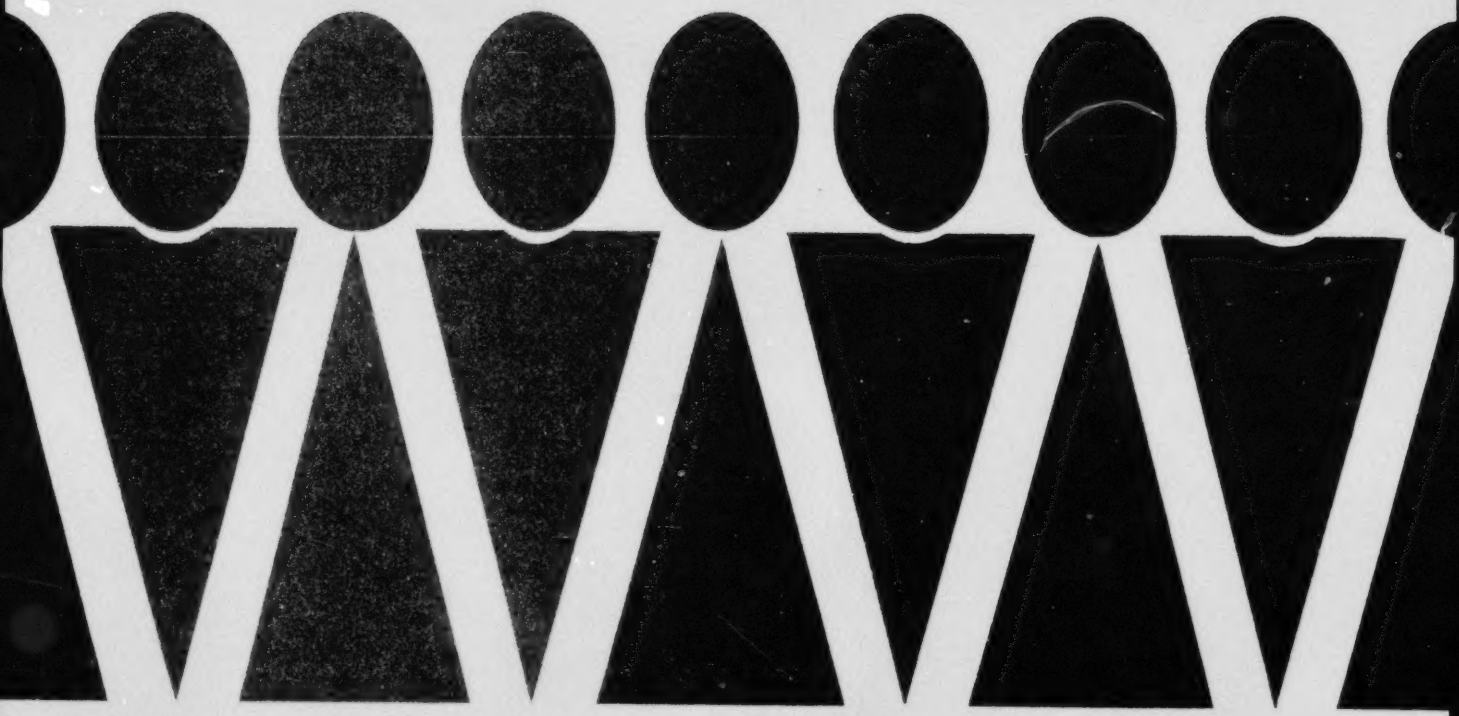
[5] This shift in New York was due almost totally to the state's use of a "Trade & Industrial Other" program classification. This is a "catch-all" classification and may be markedly affected by the programs offered in the state. In all other Non-traditional programs New York showed continued gains in women's enrollment.

It appears that the greatest increases in women's enrollment in Non-traditional programs occurred in states where a true planning process occurred, i.e., where detailed plans for the eradication of identified problems were formulated and where efforts to achieve sex equity extended beyond a mere rehashing of the verbiage of the legislation and regulations. The greatest gains were in California, and to some degree in New York, where planning systems to achieve goals and timetables were established; where monitoring systems were established; where funds were committed to establish sex equity programs; and where efforts were made to utilize the entire state staff to address sex equity issues.

Based on their state reports, major efforts clearly were mounted in Texas and Oklahoma to achieve sex equity. The former state was so far below the national average in 1972 in Non-traditional enrollments that, although marked improvements were indicated by the data, it remained below the national average in 1978. The Non-traditional enrollment of women in Oklahoma also continued to remain below the national average. Yet both Texas and Oklahoma had State Plans which were clear, practical and required assurances from their LEAs. Additionally, Texas established specific goals and timetables by occupational training area and by school level (secondary, postsecondary, and adult).

In summation, the detail provided in the State Plans regarding implementation of the sex equity provisions varied, and sometimes correlated with improved enrollment patterns. It appears that the achievement of sex equity requires not only the commitment of major funding, but also the establishment of an entire system that requires, as well as encourages, such planning activity.



# Analysis of Research

## III. ANALYSIS OF RESEARCH STUDIES

The Vocational Education Amendments of 1976 mandate national studies of the impact of the legislative provisions. Two which pertain to sex equity are: (1) a study to be conducted by the Commissioner of Education of the extent to which progress had been made in eliminating sex discrimination and sex stereotyping in all vocational education programs assisted under the Vocational Education Amendments of 1976; and (2) a study to be conducted by the National Institute of Education of the impact of the 1976 Amendments, which was later designed to include sex equity issues.

Three volumes of the Commissioner's study, reported as The Vocational Education Equity Study[1] prepared by American Institutes for Research (AIR), were reviewed for this study. In this section of the report, Volumes 1 and 2 are summarized. A summary of important findings from Volume 3 is in the appendices.

The National Institute of Education studies are not yet complete and data collected for the studies were unavailable for review; however, The Planning Papers for the Vocational Education Study,[2] a preliminary document from the National Institute of Education, contains a examination of four major national longitudinal surveys of American youth conducted within the past twenty years. This data sythesis is also reviewed in the following section.

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1 American Institutes for Research, The Vocational Education Equity Study, Volume 1: The Primary Data, Laurie R. Harrison, et.al. April, 1979; Volume 2: Literature and Secondary Data Review, JoAnne Steiger, et.al. March, 1979; Volume 3: Case Studies and Promising Approaches, Jeanette D. Wheeler, et.al. Palo Alto, CA, March, 1979.

2 The National Institute of Education, The Planning Papers for the Vocational Education Study, Publication No. 1, "Effect of Vocational Education Programs: Research Findings and Issues," John T. Grasso and John R. Shea. Washington, DC, 1979.

## THE VOCATIONAL EDUCATION EQUITY STUDY, VOLUME 1, THE PRIMARY DATA

From data and information collected during the Fall of 1978, two years after the legislation but only one year after the implementing regulation was published, the study reported the following findings*:

### State Level Activities

- Two-thirds of the state Directors of Vocational Education and the Sex Equity Coordinators reported that their states were implementing the following four activities:
  - Reviewing grants made by the state to ensure the needs of women are addressed;
  - Gathering, analyzing, and disseminating data on the status of men and women students and employees;
  - Systematically reviewing all vocational education programs in the state for sex equity;
  - Assisting local agencies to expand opportunities for women.
- Personnel in slightly more than a third of the states reported funding or sponsoring activities to create greater awareness of inequities and nontraditional options, or to provide special job development, placement, and follow-up services for nontraditional students.
- The activities which appeared to be receiving the least attention, and for which the greatest percentage of state Directors reported no implementation plans were:

* Some inconsistencies on similar questions are evident among responses received from state, district and/or school level personnel; data are reported here as contained in the original study.

- Monitoring the implementation of laws prohibiting sex discrimination in all hiring, firing, and promotion procedures at the local level;

- Community liaison activities to improve opportunities for women;

- Assisting employers to improve opportunities for women.

- In general, staff at the state level reported little involvement in local level staffing matters. Only one Coordinator reported that incentives were being provided to schools to acquire or promote staff in occupational areas which were not traditional for their sex.

- Of the activities specified in the legislation, Sex Equity Coordinators reported that on the average they were spending a quarter of their time creating awareness programs and activities designed to reduce inequitites. At the time of the AIR study, they felt that these were the most useful activities for achieving sex equity in their states.

District Level Activities

- Local Directors of Vocational Education and of Guidance and Counseling reported that LEAs were placing their greatest effort on monitoring laws which prohibit sex discrimination in staff hiring, firing, and promotion and on ensuring male and female representation on all Local Advisory Councils. Close to two-thirds reported that these activities were being implemented. However, these activities had not resulted in a more equitable distribution of men and women in vocational education administration positions at the LEA level. There still was a predominance of men who were local Directors of Vocational Education (90%) and local Directors of Guidance and Counseling (70%).

- Approximately two-thirds of the LEAs were reviewing funding practices to assure that guidelines regarding sex equity were carried out.

- LEAs were considerably less involved in research, evaluation, data collection, and dissemination activities than in review and monitoring activities.

The LEA Directors were asked if their agencies had conducted Title IX self-evaluations that included vocational education. Over 70% of the responding Directors indicated that they had implemented or completed reviews of all programs for sex inequities, and reviews of admission and recruitment policies and practices. Less activity had been carried out on the review of curriculum materials for sex inequities. Fifty-five percent of the responding Directors indicated implementation of curriculum reviews; however, almost 40% had initiated very little or no activity.

The Title IX reviews of vocational education programs, reported by a majority of LEAs as already implemented, had had little effect on student enrollment. Enrollment continued to reflect traditional enrollment patterns.

Personnel at postsecondary institutions (40%) were more likely than personnel at secondary schools (15%) to have undertaken activities to reduce sex inequities in staffing patterns.

In general, according to LEA Directors, school level activities were "informally implemented." Thirty-eight percent of the LEAs had implemented activities to make students aware of non-traditional options. Although 24% of the LEAs had implemented day care and 22% had implemented community liaison activities, over half had no plans to carry out these functions. The percentage of LEAs undertaking student or community-oriented activities was generally smaller than the percentage undertaking data collection, monitoring, and review activities.

Activities of Counselors and Teachers at the School Level

- Sixty-three percent of the counselors reported that programs to encourage non-traditional enrollment were being formally and informally implemented.

- Approximately 47% of the counselors reported that their LEAs were implementing programs to alert students to inequities and 39% were making special guidance services available to non-traditional students.

- Twenty-two percent of the counselors reported that their LEAs were engaged in community liaison activities. Twenty-nine percent reported they were providing day-care services.

Instructors and counselors reported efforts to encourage students to enter non-traditional programs; 27% of the instructors and 37% of the counselors reported formal implementation of this kind of activity at the school level. However, approximately 39% of instructors and 22% of counselors reported no plans for or knowledge of programs of this type. Approximately 36% (sic) of instructors and 18% of counselors reported formal preparation for special job development or placement programs, while approximately 50% of both groups reported no activity. At a maximum, a little more than a third of the schools were actively sponsoring programs for students.

Only 13% of both instructors and counselors reported that their schools were sponsoring programs for employers or community organizations to make them aware of problems of inequity; almost three-quarters reported no plans to do so. Approximately a quarter reported implementing special guidance and counseling services for non-traditional students; approximately 14% reported that day care services were being provided. Thus, little student or community-oriented activity appears to have been taking place at the school level.

Junior colleges and technical institutions appear to have been making the greatest effort to achieve sex equity, and comprehensive high schools and vocational high schools the least.

Perceptions of Sex Equity Problems and Progress

- A quarter to a third of the respondents at the state and local levels of the educational system generally agreed that rules denying admission to courses on the basis of sex, unwritten understanding that some courses were for males and others for females, and teacher reluctance to have non-traditional students in their courses had all changed for the better in the past five years. Yet, unwritten understandings and teacher reluctance to have non-traditional students in their courses were generally indicated as most in need of further change.

- Vocational educators at all levels indicated that community attitudes and values presented the major constraint to sex equity in vocational education. Constraints emanating from parental attitudes and influences were the second most commonly mentioned constraint.

- Representatives of outside organizations and agencies interviewed were critical of vocational education's efforts to address inequities. Impediments to change within vocational education were thought to be the predominance of male instructors and administrators, and stereotyped materials. In general, the representatives of outside organizations felt there must be stronger enforcement of the legislation pertaining to sex equity.

- Approximately 25% of all respondents (state and local staff plus outside respondents) felt it was justifiable to take the sex of a student into consideration when determining the type of work-study, cooperative education, or job placement that was arranged. However, few individuals at any level felt

there were circumstances in which inequitable classroom assignments were justified.

It is important to note that state staff indicated higher levels of implementation of review and monitoring activities than of activities designed for students (which were felt to be most effective by the greatest number of state staff). Encouraging male and female representation on Advisory Councils was perceived by the greatest number of individuals to be least effective. There appears to have been an inconsistency between those activities which states were emphasizing and those activities which were felt to be most productive.

State Impact on School Activities

School level activities that appeared to be most closely associated with those at the state level were awareness efforts and support activities for students. Furthermore, monitoring/review/data collection which represented the bulk of state level activity generally had the highest correlation with the indicators of activity at the school level. This is significant because it represents an important linkage between state and school: i.e., the more attention the state paid to what the school was doing, the more the school tended to do.

Schools that made a concerted effort to enroll non-traditional students, to assure sex equity in student programming, and to eliminate discrimination in employment were also those in which enrollment of women in non-traditional training was highest.

In sum, those schools with higher activity indicators seemed also to have been those with higher non-traditional enrollments. There were more significant correlations with non-traditional female enrollment than with non-traditional male enrollment. However, those indicators reflecting activities aimed directly at students also correlated significantly with non-traditional male enrollment.

Conclusions of Volume 1

The two conclusions of Volume 1 most relevant to this study were:

- A concerted effort must be made to identify and disseminate exemplary programs and strategies for overcoming sex inequities in vocational education.

  At the time of the study there were few examples of successful efforts to reduce sex inequities in vocational training programs. It is of vital importance that information on successful strategies be disseminated to the widest possible vocational education audience.

- There must be considerably more emphasis at all levels on activities designed to overcome inequities, in addition to the monitoring and reviewing designed to discover such inequities.

  The need for efforts to overcome inequities is a major theme throughout the legislation. However, the primary form of activity observed consisted of reviewing and monitoring -- activities which are passive in nature. Corrective action is needed to overcome inequities discovered. States, local education agencies, and schools must be provided both with incentives to act and with examples of successful approaches. Data from this study revealed that schools which made major efforts to address inequities had a higher proportion of non-traditional students. Concerted efforts, particularly those which directly involve students, are crucial in reducing inequities.

## THE VOCATIONAL EDUCATION EQUITY STUDY, VOLUME 2, LITERATURE AND SECONDARY DATA REVIEW

This volume cited studies undertaken prior to the enactment of the Vocational Education Amendments of 1976. The studies indicated that, by and large, the schools had served to reinforce the sex stereotypes of the larger society. Girls had been reinforced to develop "feminine" behavior patterns and prepare for lives as wives and mothers, not as wage earners. When girls enrolled in courses to prepare for gainful employment, they concentrated in traditionally female fields. Several studies suggested that girls got little encouragement from counselors to take non-traditional courses.

### Attitudes Toward VEA '76

One relevant study cited was Dykstra (1977), which investigated the attitudes of vocational educators in Colorado toward implementation of the sex equity provisions of the 1976 Amendments, and their level of agreement with each of the requirements. Sixty-six percent of the instructors, 57% of the local Directors of Vocational Education, 38% of the teacher educators and 28% of state staff disagreed with the provision that set aside $50,000 for sex equity personnel at the state level. A majority of respondents disapproved of the provision of day care for children of students at the secondary level. They also disagreed with provisions of vocational education programs for displaced homemakers; however, 73% agreed with the required review of the distribution of grants to assure that the needs of women are addressed. In general, the state staff were more supportive than local staff of the new legislation.

### Need for Research

A need for further research in the following areas was cited: (a) the course entry process; (b) training in school; (c) placement of students;

and (d) the attitudes and behaviors of administrators, teachers, counselors, and parents, as well as students.

The authors maintained that studies generalized about vocational expectations and achievements based on examinations of college graduates, although half the population does not go to college, and far more than half does not complete college. The working class woman and her relationship to the occupational world was conspicuously absent from existing research literature (Roby, 1975).

The meaning of work to working class women needs to be explored. They are presumed to have low motivation and career interest, despite the fact that from an early age most expect to work a good part of their lives.

PAPER ON EFFECTS OF VOCATIONAL EDUCATION PROGRAMS: RESEARCH FINGINGS AND ISSUES

This paper, contained in The Planning Papers for the Vocational Education Study, issued by the National Institute of Education, reviewed and synthesized data compiled through major national logitudinal surveys as follows: Project Talent, (1960); Youth in Transition, (1968); the National Longitudinal Surveys (of Labor Market Experience), (1968); the Longitudinal Study of Educational Effects (also known as the National Longitudinal Study of the High School Class of 1972).

The methodological shortcomings and dates of these studies affected their findings. The number of women graduates from occupational curricula other than business and clerical was too small to permit conclusions regarding the effects of their high school programs on later employment.

Jobs Sought

The studies reiterated women's segregation in occupationally stereotyped courses within all three curricula: college preparatory, general, and vocational education.

According to Grasso and Shea, these 1968 National Longitudinal Survey data are not out of date. A 1976 Gallup Youth Survey found that women retained occupational goals similar to those held by students in the 1960s. For example, the top career preferences of teenage girls still included: secretary, teacher, nurse, social worker, and hairdresser, among others. The only difference reported (Prediger, et.al., 1974) is that the proportion of high school girls who expect to work outside the home had risen over the decade.*

Wages

The authors found that in contrast to the results for men, the evidence indicated that vocational education for girls in high school strongly benefited them later in the labor market. However, unexpectedly, it was found that the wage and earnings statistics demonstrated that the benefit in wages was in sex-typed occupations. This may have resulted because only the business and clerical course had enough women students for separate analysis.

Conclusions of the Paper

- Grasso and Shea suggested that those who criticize vocational programs on the basis of occupational sex-segregation should carefully reconsider the alternative occupations available to the average young woman.

* Subsequent studies have noted that massive changes occurred in the attitudes and aspirations of young females relative to work, education, and childbearing. For example, only 25% of females surveyed in the 1979 NLS reported that they wanted to be exclusively homemakers at the age of 35. This is a decrease of 35% since the 1968 NLS. (Borus, et.al., 1979.)

- The results suggested that women working in non-sex-typed jobs were not necessarily better off than other young women. The effects of holding a traditional job varied by level of schooling and by race, but apparently those with less than a baccalaureate degree had a financial advantage working in a sex-typed job.

## Commentary

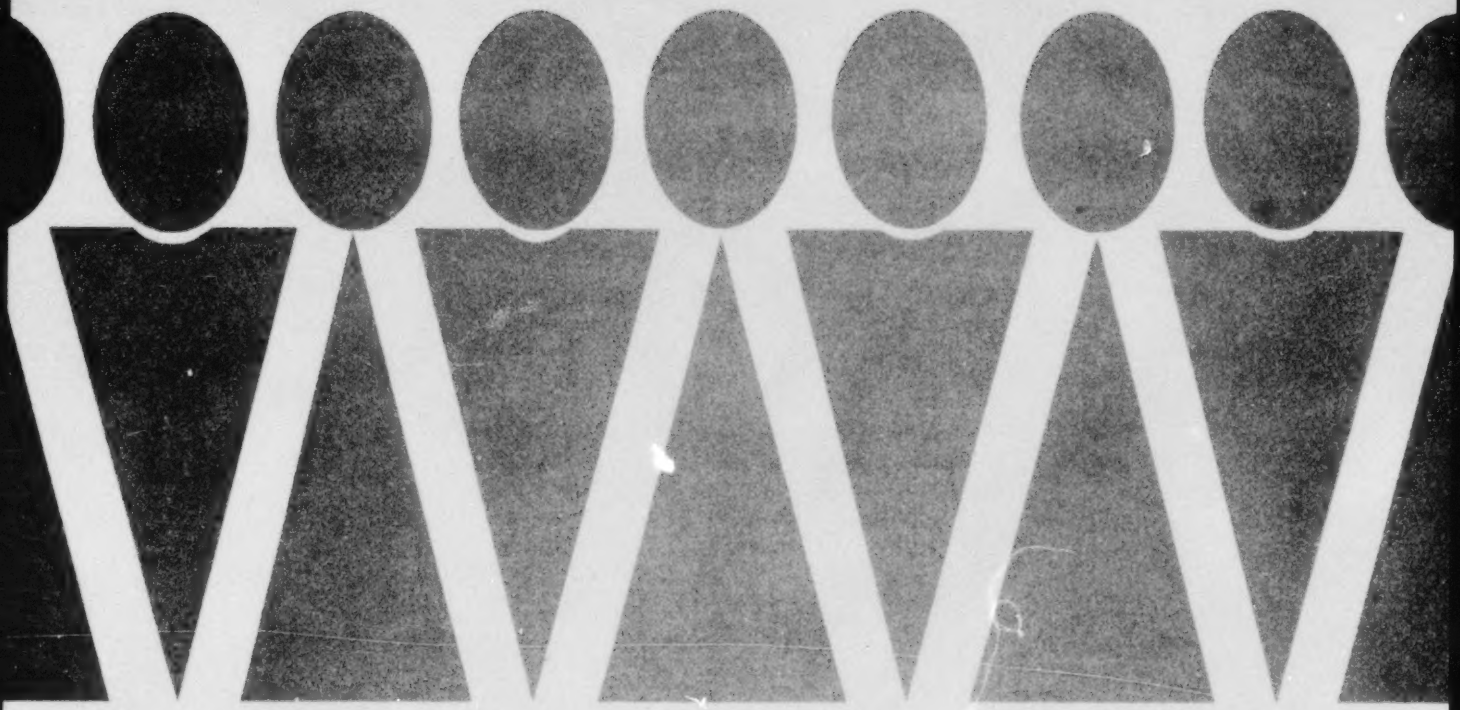
The Primary Data, Volume 1, The Vocational Education Equity Study by AIR and Section II, Analysis of State Reports and National and State Enrollment Data, of this current study for the two Councils reflect similar findings regarding conditions in the state and local education agencies and provide some insights which may be useful in considering where the vocational education legislation may be strengthened for improved implementation.

On the other hand, the Literature and Secondary Data Review, Volume 2 of the AIR study, because of the dates of studies reviewed, merely redefined the conditions that the sex equity provisions of the legislation were designed to correct. Therefore, Volume 2 provides only limited insights regarding the impact of the new mandates and provisions.

It should also be noted that the research by AIR was conducted only one year after Federal regulations for implementing VEA '76 were issued -- regulations were published in October 1977; and the data and information collection are from the spring of 1978. Caution is warranted since the changes reflected in the field at that time more likely resulted from the implementation of Title IX legislation than from the sex equity provisions of the Education Amendments of 1976. Likewise, more recent changes as a result of VEA '76 are not reflected in these early data.

The paper on "Effects of Vocational Education Programs: Research Findings and Issues" attempted to examine national longitudinal studies for their relevance to vocational education, even though none reviewed was originally

designed to analyze vocational education. Consequently, the studies' employment-related data are inadequate for drawing precise conclusions on vocational education. Additionally, the samples contained in the studies are outdated -- the oldest of the studies, Project Talent, collected data in 1960. In the interim there has been a "subtle revolution" in the work patterns of women, markedly affecting their training for work as well. The Grasso and Shea contention that conditions had not changed for women since the 1960s cannot be validated until further research has been undertaken. The conclusions drawn in their study, however, may be relevant to the consideration of the need for changes in vocational education legislation.



# Hearings

## IV. HEARINGS

Approximately 80 persons from 21 states participated in the Councils' two public hearings on sex equity in vocational education held in May, 1980. The hearings, designed to gain the perspective of individuals and groups affected by the sex equity provisions and those responsible for implementing or monitoring the legislation, were held in New York City (May 8-9) and Denver, Colorado (May 15-16). Witnesses were invited to present testimony before members of the two Councils, and at least one member of a State Advisory Council on Vocational Education.

### ORGANIZATION AND CONDUCT OF THE HEARINGS

The regional design of the hearings -- one in the East and one in the West -- was based upon prior studies which found that the participation of women in non-traditional education varies by the region of the country, size of metropolitan/rural location, by age and by racial/ethnic group.[1] The assumption was that, although the broad legislative issues raised in the two locations would be similar, the variables affecting service needs of women and the administrative tasks of service delivery would be different.

The two hearings were publicized through public notices, media and letters to a wide range of organizations and associations concerned with sex equity issues, encouraging them to attend the hearings and participate in the discussions and/or submit written testimony. A wide variety of

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[1] A Study of the Factors Influencing the Participation of Women in Non-traditional Occupations in Postsecondary Area Vocational Training Schools, Rj Associates. Arlington, VA, 1977.

Rural Women in Postsecondary Vocational Education, Rj Associates. Arlington, VA, 1978.

Women in Non-traditional Vocational Education in Secondary Schools, Rj Associates. Arlington, VA, 1978.

knowledgeable individuals were invited to address key issues of concern to the Councils; additionally, evening sessions provided opportunity for the Councils to hear from other persons who wished to present testimony.

A panel format for the hearings enabled the Councils to receive testimony focusing upon issue areas; witnesses presented testimony individually followed by group discussion and interaction with the Council members. Each hearing began with a panel presentation of "State Profile" -- an overview of the progress of one state in detail (in the East) or several states (in the West) in implementing the sex equity provisions of the Federal legislation. The second panel at each hearing focused on the "Perspective from Persons Outside the Vocational Education System" with an emphasis on testimony from organizations concerned with sex equity issues. The third panel in the East concentrated on the "Special Needs of Minority Women;" in the West the third panel directed its attention to the role and functions of the Sex Equity Coordinators. The fourth and final Eastern panel examined "Supportive Services/Innovative Programs;" the Western, "Postsecondary Vocational Education and Displaced Homemaker Programs." An evening panel in the West also addressed the "Special Needs of Minority Women."

A "Roundtable Discussion" on the implications of the testimony for legislation closed each hearing. This session enabled Council members to discuss with the witnesses the issues raised during the hearings and related concerns. It also provided an opportunity for others present to question witnesses and Council members and to discuss the issues.

## SUMMARY OF TESTIMONY

Witnesses addressed the full range of issues of interest to the Councils: funding, the focus on sex equity, special needs of women, postsecondary education, the role of Sex Equity Coordinators, the utility of public hearings on State Plans, attitudes and training of vocational education personnel, and the impact of related legislation; additionally, they

raised several other areas of concern: services and programs for displaced homemakers, the needs of minority and adult women, attitudes of parents and peers, concerns that sex equity include accessibility for both sexes. The role of Federal legislation and government in vocational education, curriculum, and texts, and the problems associated with changing attitudes were covered. There was discussion of programs, successful efforts, and barriers to the progress of sex equity.

This summary synthesizes the comments, information, and detailed statements of witnesses on issues. It is not intended to be an exhaustive review or replication of testimony, but rather a focus on the substantive points of testimony and written statements received.

## Federal Role

> "The Vocational Education Amendments of 1976 not only outlawed discrimination in vocational programs, but also mandated active efforts to reduce sex bias and stereotyping. It is this area of affirmative action that the new Federal vocational education amendments need to address once again with renewed strength and commitment. The new OCR Guidelines for Vocational Education are an encouraging sign that equity in voc-ed is a national priority. Adequate staffing and accountability procedures at state, local, and Federal levels, however, must be provided to ensure that these new guidelines do indeed support the full implementation of the 'spirit' as well as the 'letter' of the law."
>
> Sex Equity Coordinator

Many witnesses expressed concern that the law is too vaguely written. In some cases, the "letter of the law" or the minimum requirements are being met without any significant progress toward equity. The problem is twofold: (1) the legislation is not flexible enough to allow the various administrative and service functions within the vocational education delivery system to operate according to the different structures

of the states and localities; and, (2) the leniency of "may" versus "shall" language leaves little opportunity for accountability and enforcement of the sex equity provisions.

Serious concerns were raised, especially at the New York hearing, regarding whether the current vocational education system was precluding the equity and upgrading needed by women and whether fundamental changes would be required in order to assure equal access. While most of the witnesses stated that their respective states met the minimum requirements for sex equity, few cited examples of state initiative to assure that the intent as well as the letter of the law was enforced. For example, through the hearings only two states (New York and California) were identified which had required LEAs to meet specific sex equity requirements as a condition of funding.

Witnesses suggested that, as a minimum, mandatory language be included in the reauthorization to require: sex equity in vocational guidance and counseling; services for displaced homemakers; curriculum revision to eliminate sex bias and sex stereotyping; sex equity training and personnel development for administrators, teachers, and counselors; day care programs; and assistance to women in preparing for and obtaining non-traditional employment.

Concern regarding the Federal role extended beyond the reauthorization of vocational education as a single piece of legislation and suggested the need for broad legislative coordination to achieve sex equity:

> "There have been many important efforts to provide for improved coordination at the Federal level in the area of education/ work. Interagency coordination is taking place . . . Two major national advisory councils have joined forces to hold these hearings . . . Next year will provide an extraordinary opportunity for furthering a coordinated approach if, as may be the case, vocational education legislation is reauthorized along with the youth programs of CETA (the Youth Employment and Demonstration Projects Act, or YEDPA), and in conjunction with the new Administration proposal. As the

broad issues of education/work are addressed, specific approaches should be identified for meeting the needs of special populations in a comprehensive and coordinated way at the Federal level."

Legislative Analyst for a National Organization of States

Witnesses generally agreed on the need for linkages between vocational education and other work/education agencies. The Comprehensive Employment and Training Administration (CETA) and the Office for Civil Rights (OCR) were mentioned repeatedly as agencies which should have a close working relationship with vocational education.

One witness suggested that a mandatory sex equity component should be built into all Federal legislation. It was also suggested that the Vocational Education Amendments could require that teams of equal education opportunity compliance officers and technical assistance specialists be formed in every state agency and available in adequate numbers and levels of positions to have the clout to enforce the OCR guidelines at the state and local levels.

## Special Needs of Women

Supportive services is one of the options the legislation leaves to state discretion -- such services might include child care, transportation, and attention to the needs of displaced homemakers, minority women and adult women.

### Child Care

The crucial need for adequate, affordable child care services was addressed by a number of witnesses, as was the need for legislators to recognize that child care is essential and clearly related to employment. Witnesses stressed that in order for vocational education to reach women efforts must be made to ensure that they

remain in school. One witness pointed out that the dropout rate for students entering the ninth grade in the New York City public schools is 45%, that pregnancy is the major reason for dropping out, and that about 80% of pregnant teenage dropouts never return to school. Nor is the problem confined to urban areas; Maine has the highest teenage pregnancy rate in the nation.

There is an extreme shortage of day care for children under three years old. New York City was cited as an example; there are only eight centers for infants in the city, five in Brooklyn where they are inaccessible to much of the population. Inability to find affordable infant care is a problem especially for teenage parents.

> "In a kind of oversimplified way and as absurd as it may sound, I would say that the special needs of minority women as they pertain to vocational education are, first and foremost, birth control and adequate childcare."
>
> Dean of Continuing and Adult Education and Chair of a Commission on the Status of Women

Despite the great need for child care services, only one state represented (New Mexico) indicated that day care services were provided through vocational education funds and this through a joint training and service project. In Oregon, the LEA decides whether to fund day care.

Although witnesses stated the need for Federal attention to day care, they cautioned that the approach to child care must be flexibile. Regulations of CETA and of many state departments of public welfare require that children be placed in a licensed day care center. Unfortunately, these centers are "day" care programs and are not available for evening adult education students. Provisions allowing women to pay their relatives and neighbors for child care were suggested as a means of dealing with the time problem as well as the shortage of available centers.

## Transportation

Accessibility to vocational education is often impeded by transportation problems, a particular difficulty for low-income women. A Denver hearing witness, whose program includes job placement as well as vocational education, noted that the costs of either owning an automobile (payments, repairs, gasoline) or using public transportation (not always available) to reach school or work have affected the program's ability to serve women. Often the problem is compounded when children must be transported to day care centers as well. Rural women, as well as men, often have no access to public transportation and a witness from Colorado noted that only one city in that state has even limited public transportation.

## Displaced Homemakers

> "Most displaced homemakers need vocational services. Most are unprepared to enter the occupations in which there is a real demand today. Vocational education funds coordinated with state and CETA funds could address these needs beautifully. A small beginning has been made. But there is a great deal yet to do."
>
> Director of a Displaced Homemaker Program

Currently, only two legislative acts include displaced homemakers among those eligible for funding in employment and training programs: the Educational Amendments of 1976 (vocational education programs for displaced homemakers and other special groups) and the Comprehensive Employment and Training Act Amendments of 1978. Some states have passed legislation to assist displaced homemakers while other states have provided little or no money for assistance. Witnesses stressed that until very recently, the plight of the displaced homemaker had not come to the public's attention and only in the past few years have legislators become concerned about providing services to these women.

The displaced homemaker programs represented at the hearing presented program designs that varied in services provided and funds available. Most witnesses agreed that more support was needed from the community and the legislature. One witness expressed concern that vocational education money earmarked for special groups had not been used because no requests for proposals had been written at the state level.

The testimony contained many strategies for program improvement, expansion and development. Some of these have already been incorporated into the programs and some were "think pieces;" they include the following:

- The term "displaced homemaker" is for some unfamiliar and/or has negative connotations for employees and students. One witness suggested that "career changers" might be a better description.

- More data are required to substantiate the existence and needs of displaced homemakers.

- Advisory committees should be established to monitor expenditures of vocational education funds to insure their appropriation to displaced homemaker programs.

- Program personnel should develop working relationships with vocational education staff at the administrative level to coordinate efforts, provide support, and conduct joint planning sessions.

- Off-campus displaced homemaker centers (as opposed to centers at educational institutions) may provide a better environment for women returing to school or work.

- Non-traditional training should be made available through displaced homemaker programs. A hands-on curriculum could be used to introduce such training.

- Special staff could be funded in college job placement offices to provide job referral and placement.

- One witness felt the greatest need is for synergism among the programs, the development of a collective identity:

> "...there is an enormous need for collaboration and cooperation between all displaced homemaker centers. The centers which are community based organizations and those that are housed in educational institutions exist for the same purpose - to help the displaced homemaker make the transition from being traumatized to being made self-sufficient, as effortlessly as possible."
>
> Program Associate for a Displaced Homemaker Program

Minority Women

Many of the issues expressed as being of particular concern to minority women (e.g. day care, transportation, counseling) are issues affecting all women, and minority men as well. Hispanic witnesses discussed the need for outreach to minority peoples through community based organizations; Black, Hispanic and Indian witnesses cited the negative image of occupational education programs in minority communities. These negative attitudes toward vocational education are prevalent in the minority communities whose students have often been stereotyped as scholastically unable to compete in academic studies. This is particularly true in the Black community. As a result, many minority youth are encouraged by their parents to shy away from "shop" courses and to get an academic education which will prepare them for a white collar job.

> "Specifically, there is a need to disseminate to the Black Community the image of vocational education that elevates and places emphasis on the advantages afforded one who receives both a sound academic education plus vocational skill training."
>
> Career Development Specialist for a Local Education Agency

There was concern that vocational education work to eliminate attitudes which cause Indians to be placed in courses based on the assumption that they are "good with their hands" as a result of beading and making baskets.

Difficulties facing Hispanic minority women were identified. Witnesses at the New York hearing emphasized the need for programs designed to address unique cultural differences as a means of encouraging the participation of minority women in vocational education. In the West, again the hearing panel was told that because of cultural differences many Mexican-American women were reluctant to participate in non-traditional training. For non-English or limited English speaking students who are preparing to enter the work force there is a need to prepare teachers and counselors better, and to modify curriculum. Cultural variations were expressed:

> "Indian women face a great deal of societal pressure to marry and bear children at an early age. And the Indian mother has always been viewed as the one most responsible for caring for and raising the children. Her family and peers tend to value her skills in homemaking and child rearing more than for any ambitions and abilities she may have."
>
> Special Projects Coordinator of an Indian Education Program

> "National programs and Federal legislation have had an impact upon the status of black women; however, it has not been significant. Black and Spanish speaking women are still at the bottom of the ladder in every instance except unemployment. According to 1978 Bureau of Labor Statistics Report, minority teenage girls accounted for 34.5% of the unemployment population, surpassing even black teenage boys."
>
> Career Development Specialist for a Local Education Agency

In addition to the perceptions and values affecting minority interest in vocational education, there was concern for more minority involvment in program planning and monitoring. Advisory Councils drew attention -- one witness expressed concern that one Black woman on an Advisory Council does not mean there is adequate minority representation, that the needs of Hispanic and Indian women are very different. A possible improvement might be requiring proportional representation of the state's minority population.

Adult Women

Again, for adult women, the issues of child care, counseling, and transportation were raised in regard to the postsecondary vocational education delivery system. Witnesses stated that women tend to make career decisions later in life than men and suggested that there be more emphasis on enrollment equity and program development in postsecondary vocational education.

During the Eastern hearing there was considerable discussion of the barriers for women seeking to enter apprenticeship programs and non-traditional employment. Witnesses at the Western hearing also cited a lack of action on, or even recognition of, the problems of age discrimination as well as sex bias. They suggested the need for changes within the delivery system itself, as well as the need to prepare potential workers to be employed in occupations predominated by the opposite sex.

Sexual harassment and abuse were cited as critical problems for non-traditional employment and occupational preparation and, although no suggestions for resolving or dealing with these issues were offered by witnesses, many questions were raised. If the vocational education system trains women for non-traditional jobs, will industry employ them? Can vocational educators influence recalcitrant unions and contractors? Is there any way for vocational educators to address the sex discrimination and age discrimination

(many trades continue to have upper age limits for apprenticeships despite 1978 Department of Labor affirmative action guidelines which permit their waiver) that women in adult education programs will later encounter?

## Curricula and Texts

> "Textbooks continue to reflect stereotyped views of men and women, especially in the vocational areas where women are virtually nonexistent."
>
> Sex Equity Coordinator

> "One woman role model can do more to effect change than 100 planned activities. One woman to demonstrate the absurd nature of the present inequities. One woman to teach, to demonstrate, to lead."
>
> Administrator of a State Regional Education Agency

The need to introduce students to a range of career possibilities through infusing sex-fair materials into the curriculum was expressed by many witnesses. It was generally agreed that the curriculum should include techniques that serve to expand students' views of their potential career options and expose them to women and men in non-traditional jobs.

Witnesses suggested exploratory programs at the junior high school level as a means to help students make better decisions in high school. Additionaly, it was suggested that coordination between vocational education and career education programs may be a means to ensure that non-sexist career materials are infused into the curriculum at the elementary school level.

Counselors and instructors

> "Sex stereotyping is still a problem in most school systems. Studies show that both male and female counselors respond more favorably to female students who select traditional career interests. . . Very few women are local vocational administrators or instructors in the nontraditional programs, hence few role models for girls to see."
>
> Sex Equity Coordinator

Witnesses at both hearings agreed that more focus on pre-service and in-service sex equity training for the instructors and counselors is needed because they affect the students' career and training choices. Programs that help educators to examine their personal views and attitudes regarding vocational training and non-traditional work opportunities for women are also needed. Witnesses suggested that attendance of counselors and teachers at workshops or seminars on sex bias should be made mandatory.

One witness pointed out that even though funds are available to acquaint guidance counselors with changing work patterns and sex equity requirements, there is little change because the funds are not used. Many counseling departments do not give high priority to sex equity issues; therefore, girls are not fully informed of their career options and, in many instances, are steered away from traditional male courses such as math and science. Without a background in math or science, girls are unable to meet requirements for entry to a majority of non-traditional training programs.

Vocational education funds are also available for in-service training for vocational education teachers and other staff members to overcome sex bias and stereotyping. However, the experience of many of the witnesses was that instructors are resistant to most programs and activities that deal with changing their attitudes. Another factor which deters instructors from taking additional training is that in some states certified vocational instructors are not required to take

additional course work or training in order to continue teaching. One example is New York State where 70% of all vocational teachers are permanently certified, 100% of all home economics teachers are female, and 98% of the industrial arts teachers are male.

Other witness suggestions included:

- Vocational aptitude tests should be examined for inherent sexism.
- Principals, school board administrators, and certification committees should require in-service and pre-service sex equity training for instructors and counselors.
- More bias-free guidance materials should be developed.
- Women instructors should be recruited and trained to teach non-traditional courses.
- Counselors should develop support systems for girls in non-traditional courses. Often girls participating in these courses are subjected to sexual harassment.

Public Hearings

The Federal legislation mandates public hearings as part of the development of each State Plan for vocational education. Although this mandate was not designed solely to achieve sex equity, it does theoretically present the opportunity for the special needs of women previously noted in this section, as well as other sex equity issues, to be heard. The potential is for individuals and groups to state their concerns about existing and planned vocational education programs, and to have an impact on the State Plan before the state receives Federal funds.

Several of the individuals and organization representatives outside of the vocational education system testified on the public hearing process. Their attempts to monitor and review State Plans and their testimony at the mandated public hearings had shown a mixed effect on the State Plan. One witness' experience was positive:

> "It is my conclusion from our experience that recommendations will be implemented only through the commitment of the top administration. At the same time, the top administration will not be able to commit itself to implementing recommendations which are never made. Because the recommendations and report of the (State) Commission for Women were available at the time that he took office, (Deputy Secretary of Education) was able to move rapidly to implement policies reflecting our concerns."
>
> Chair of a State Commission for Women

Other witnesses stated that their comments and recommendations at public hearings had had only limited effect; many felt their testimony had no impact or only very minor impact on implementation of the sex equity provisions. Another questioned the whole process:

> "Vocational education should be initiating and doing, not responding."
>
> Director of a State Commission for Women

Witnesses cited the following problems with the public hearing process:

- insufficient time to review State Plans (some Sex Equity Coordinators also expressed this concern);
- women's groups and others who may be interested in sex equity issues are not aware of the public hearing process;
- groups that have testified repeatedly without seeing positive results may not feel it is an effective use of their time;

- citizens often find the language of the hearing materials confusing. One witness stated:

> "It is difficult to understand the system, and I think they like it that way."
>
> Director of a Commission on the Status of Women

Sex Equity Coordinators

One of the major new provisions contained in the Education Amendments of 1976 was the requirement that each state employ full-time personnel to assure implementation of sex equity. Funded for a minimum of $50,000, this Sex Equity Coordinator has ten specifically mandated functions. The legislation allows considerable flexibility, however, regarding the position of the Coordinator within the organization and how the functions are accomplished. One Sex Equity Coordinator's statement exemplified the view of many:

> "I can assure you that Sex Equity Coordinators are working hard to achieve sex equity in education. We feel strongly that every student should have the opportunity to learn concrete skills which will ultimately lead to gainful employment. Vocational education plays an important part training students to enter the world of work. As the nature of our society becomes that much more complex, the preparation of all students for survival in that society becomes even more vital."
>
> Sex Equity Coordinator

The role of the Sex Equity Coordinator was viewed by witnesses as an essential factor in achieving equity and in eliminating sex bias. The need for expanded support of this position was generally expressed.

Although there was general agreement regarding the necessity for such a position, the specific responsibilities and functions raised considerable discussion among witnesses. The following capsules highlight the issues raised:

- The ten mandated functions of the Sex Equity Coordinator require an enormous amount of work with very little money and, in some cases, no staff beyond the Coordinator. The Coordinators need technical assistance and training to enable them to perform their responsibilities. These services should come from the Federal level.

- Although the ten mandated functions are time consuming given current staff and funding, they should be retained; all of the functions are necessary. It was recommended that accountability for sex equity be built into the jobs of other state officials so that equity becomes a responsibility which reaches beyond the Coordinator. Witnesses suggested that some of the duties of the Coordinator be infused into the jobs of the local administrators, state Directors of Planning and others in the system.

- The across-the-board funding level of $50,000 for sex equity personnel is not appropriate in every state. The current allocation system does not take into account the major differences in the states (area, population, number of LEAs, etc.). Fifty thousand dollars is not enough money in most states for sex equity programming and many coordinators have been unable to secure additional funds. The legislation says that states "may also use part of the grant to support additional full time personnel." However, in many states the Sex Equity Coordinator has only a secretary; in some states, not even that.

- It was suggested that persons responsible for presenting formal testimony and recommendations to Congress for reauthorization should "pick the brains" of the coordinators. Their

experiences have been invaluable and many have concrete suggestions that should be included in any statement on legislative policy.

- Coordinators should develop a stronger working relationship with CETA. They should be required to sit on State Employment and Training Planning Councils and work closely with Private Industry Councils, local CETA Advisory Councils, and other community groups.

- Some witnesses wanted the Sex Equity Coordinator to monitor vocational education from a position outside of the department of education. Others thought that an inside position held most potential for effecting change. Although most Coordinators are located within the state vocational education unit, one felt her placement in another part of the state department gave her more access to resources.

- Another area which generated differing opinions was the appropriateness and effectiveness for the Coordinator of having compliance responsibility. Some witnesses wanted the position coordinated with Office for Civil Rights enforcement functions. Others felt that the Coordinator should be responsible only for technical assistance. They maintained that either: 1) carrying out the "police" function detracts from the support and trust required to bring about change; or 2) when compliance and assistance are too closely linked, the legal clout of the former tends to overshadow the latter. There was little testimony to indicate whether the Sex Equity Coordinators had established a working relationship with the state Title IX Coordinators to combine mutual interests and similar reponsibilities.

- Witnesses generally agreed that if the Coordinator is located within the vocational unit, the position should be as close administratively to the state Director of Vocational Education

as possible. The position of the Sex Equity Coordinator in the state hierarchies varies considerably. In some states, the Coordinator is on the same level as the assistant commissioner and is consulted regarding all programmatic decisions; in other states the Coordinator is nearly powerless, having virtually no contact with program staff, no control over sex equity funds, and seeing the State Plan only at the time a signature is required. Witnesses agreed that in order for the functions of the Coordinator to be implemented, the commitment of the state Director of Vocational Education is essential. However, one witness strongly recommended that the:

> ". . .Sex Equity Coordinator or person charged with elimination of sex bias be employed outside of the vocational education system to encourage independent monitoring and evaluation. Minnesota's Council on the Economic Status of Women has a $50,000 grant to do this and in Pennsylvania the Sex Equity Coordinator is in the Department of Education, not the vocational education department. Individuals located within vocational education are subject to intimidation, compromise, and vested job interest."
>
> Director of a Commission on the Status of Women

## Other Major Considerations

Two additional considerations were suggested by witnesses to the Councils: (1) that the Councils recognize sex equity as an issue affecting men as well as women; and, (2) that there be recognition of the difficulties involved with changing attitudes.

### Sex Equity as an Issue that Affects Men as Well as Women

> "The issue of sex equity is not just for women, it is a human issue. Within the area of vocational

education sex bias and sex stereotyping limit occupational choices made by both sexes. . . It is significant to emphasize that males are half the problem... if we are to make significant social change, more emphasis must be placed upon increasing the awareness of males."

Professor of Industrial Arts

Witnesses agreed that strategies and programs should be developed that are designed specifically to broaden students' views about occupational options and that the focus should apply to men and women equally.

Witnesses urged that Federal funds should not be available for home economics or industrial arts programs which are designed exclusively for boys or girls. Co-ed industrial arts and home economics at the junior high school level were commended as an excellent means to allow boys and girls to work together on activities traditionally reserved for just one sex.

Attitudes

"The law can mandate things, but it cannot mandate commitment to change. Attitudes of people can only be modified through intensive, meaningful, and consistent training... Programs must be developed which are geared to the adult population who come into contact with our students. Local schools must be directed to starting working with parents, students, and the community in a planned, results-oriented manner. This (sex equity) is a societal problem and cannot be dealt with in isolation."

Director of a State Regional Education Agency

This statement was reflected in the testimony of many witnesses participating in the hearing. Repeatedly witnesses expressed concern over widespread negative attitudes toward the selection by women of non-traditional training and employment. These attitudes are prevalent in persons of all ages and races. Students, parents,

teachers and employers often reflect the current societal pressures to conform to traditional roles. Students who do select non-traditional vocational education courses are frequently subject to harassment by their peers of both sexes, their parents, community leaders, and, in some instances, teachers. Without modification of negative attitudes and without creation of a positive awareness in the community, there is little chance of achieving sex equity in vocational education.

A survey conducted in a Massachusetts community by OPTION (Opening People to Opportunities Now) in June 1979 was designed to investigate attitudes of junior high school students, their parents, and teachers toward male/female roles in society, both at work and at home. The results of the survey presented below summarize respondents' attitudes as traditional or non-traditional:

| Attitudes | Students | | Parents | | Teachers | |
|---|---|---|---|---|---|---|
| | M | F | M | F | M | F |
| Traditional | 88% | 57% | 79% | 69% | 45% | 30% |
| Non-traditional | 12% | 43% | 21% | 31% | 55% | 70% |

The interesting implications of these data were discussed:

> "Notice that the majority of both students and their parents were traditional in their thinking despite the fact that their teachers, especially their female teachers, were generally non-traditional in their attitudes. It seems to me that adult attitudes have to change if equity is to become a reality in the forseeable future, since parental pressure on children to remain in the traditional career and life patterns is evident."
>
> Sex Equity Coordinator

In addition to the problems associated with non-traditional course selection, there is the problem of the broad stigma attached to the field of vocational education. One witness felt that negative

attitudes about vocational training were the result of parents being embarrassed because their children were not in traditional academic programs. Many parents believe that occupational training means their children are not "good enough" to complete an academic study program and go on to college. To these parents, vocational education prevents their children from achieving the "American Dream": higher education, upward mobility, and a professional job.

In order to achieve equity successfully, strategies must be developed that address attitudes and work positively to induce change. Witnesses suggested the following programs/methods for changing these negative attitudes:

- Women who are successful in non-traditional jobs should be asked to speak to school and community groups. They could act as role models to encourage employers to hire women with non-traditional training.

- Materials should be developed for dissemination to students and counselors regarding options in vocational education courses.

- Monies should be spent on providing training for vocational education instructors and counselors.

- Materials should be disseminated to promote a positive image of vocational education by emphasizing the advantages of a sound academic education accompanied by vocational skill training. Community leaders should be made aware of the importance of expanding career options.

- Workshops and training sessions should be provided for parents, educators, and community and religious leaders who could then run similar workshops in the community.

- Schools should arrange career days to enable students and parents to explore non-traditional programs, and talk to couselors, employers, and persons working in non-traditional fields.

- Public service announcements for radio and television should be designed and produced. This approach would expose a broad range of people to positive statements about vocational education and non-traditional training, while requiring only a small expenditure of funds.

## Commentary

The Councils' hearings resulted in the identification of controversies on these and related issues; they pointed to the success of the legislation in some states and in some areas, to shortcomings in others. Within each of these five issue areas, there are numerous points for discussion and deliberation. This commentary is provided to focus such dialogue:

- Federal Role -- the extent to which vocational education legislation should be prescriptive for the state and local delivery system. Will flexible or mandatory language best accomplish the intent for sex equity? Should the legislation provide for mandated linkages with related legislation to strengthen efforts to elminate sex discrimination, sex stereotyping and sex bias?

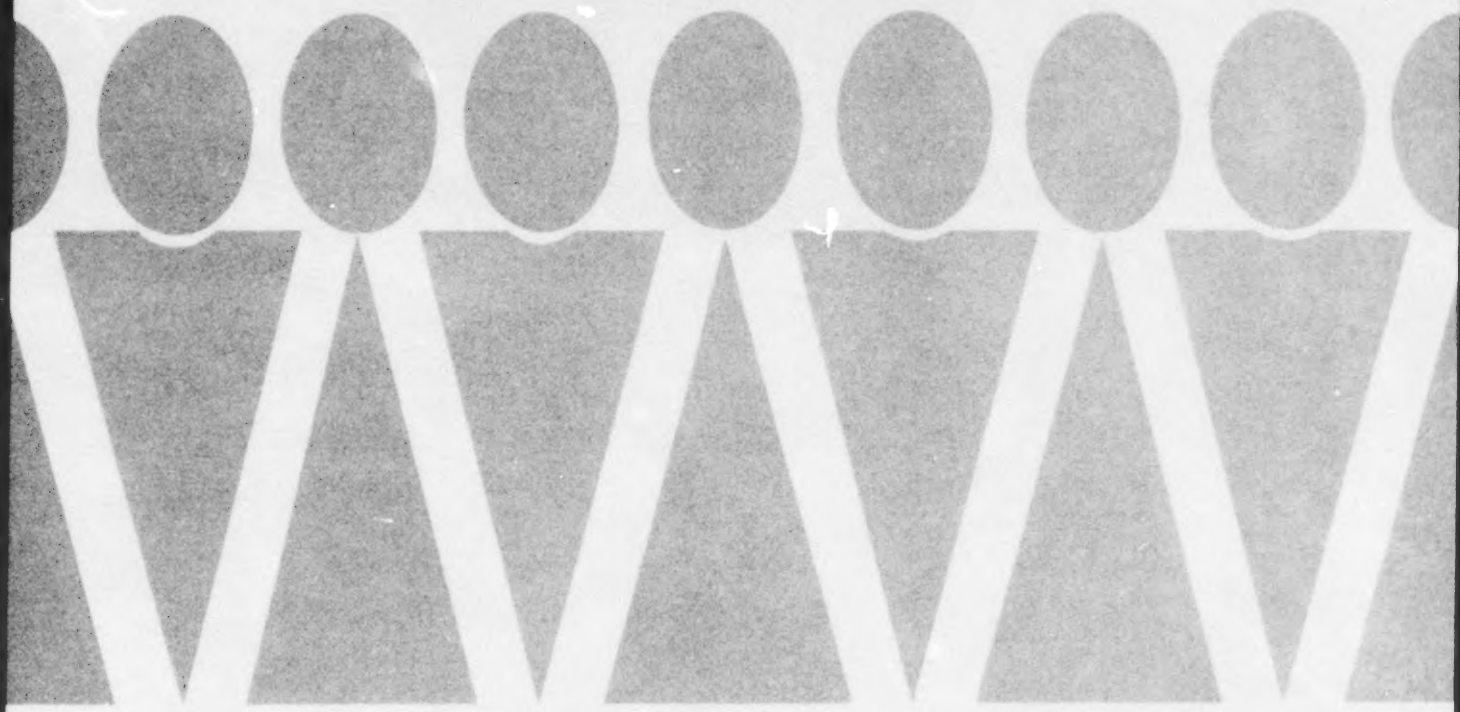
- Special Needs of Women -- the extent to which vocational education funding should be authorized and/or appropriated for child care, transportation, displaced homemaker services, programs and services specifically for minority women and adult women. Should appropriations be designated to meet the

identified needs specifically of women? Should additional incentives and means of addressing these needs be explored for possible inclusion in the Federal legislation?

- Curricula and Texts/Counselors and Instructors -- the extent to which Federal legislation should/can ensure improvements in staffing and materials which affect attitudes and accessibility. Should/can Federal legislation affect these parts of the vocational education delivery system, or are there other strategies that need to be employed?

- Public Hearings -- the extent to which the process has been effective in assisting sex equity efforts. Is the current legislation sufficient to assure that public input and comment is being effectively received and addressed? Should the provisions be strengthened, modified, or deleted?

- Sex Equity Coordinators -- the extent to which the mandated functions are realistic and being implemented. What are the most effective options for administrative placement of the Sex Equity Coordinator within the states' delivery systems, for the scope of the functions and their relationship to similar functions of other legislation, and for the level of funding?



# Appendices

## V. APPENDICES

The appendices contain the following information:

A. Lists of vocational education programs designated as Non-Traditional, Mixed, and Traditional for women in 1972. These designations were retained as a base for the analysis of enrollments in 1976 and 1978.

B. A table of the U.S. percent enrollment of women in Non-traditional, Mixed, and Traditional categories by occupational training area and year.

C. A table of the number and change in number of total, men, and women students enrolled in gainful vocational education 1972-78, for each state studied and the U.S..

D. Analyses of reports and enrollment data from the fifteen states studied, organized in the following manner for each state:

- A summary of the analyses of the state reports and enrollment data.

- An analysis of the state reports, including:

  - Specific recommendations or findings on sex equity from the State Advisory Council on Vocational Education (SACVE), the public hearing on the State Plan, the Bureau of Occupational and Adult Education (BOAE)[1] staff report on the State Plan, the BOAE

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[1] Data were collected prior to the establishment of the Department of Education and its Office of Vocational and Adult Education.

Management Evaluation Review for Compliance and Quality (MERC/Q) report (where one was performed), and the state's response(s) to the above (when the state responded).

- Unique components of the State Plan that were of particular interest and/or could not be conveyed by items in the Matrix. (See E. below.)

- A short description of all sex equity programs that were detailed in the 1980 State Plan and/or the 1978 Accountability Report.

- Fiscal year 1978 budget data for sex equity activities, including purpose of funding, funds allocated, and funds expended, from the Accountability Report. There were discrepancies in many state Reports, but the allocations and expenditures were reported from the best data available. These should be checked at the state level. Many states had an unexpended balance in their Reports, but no evidence in their Plans of the inclusion of carry-over funds from the previous year.

- A table of the percent enrollment of women in Non-traditional, Mixed, and Traditional categories by occupational training area and year.[2]

- An analysis of detailed enrollment data for 1972, 1976 and 1978. Unless otherwise specified, discussion of enrollment changes refers to changes in enrollment of women.

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[2] Data were obtained from BOAE. California enrollment data were supplied by the California State Office of Vocational Education.

E. A matrix displaying the basic substance of sex equity activities addressed in each of the fifteen State Plans.

F. A short description of the common elements of successful sex equity programs featured in the Vocational Education Equity Study, Volume 3: Case Studies and Promising Approaches.

G. Lists of witnesses at the public hearings on sex equity in vocational education sponsored by NACVE and NACWEP in New York City and Denver, Colorado, May 1980.

Appendix A

## Vocational Programs Designated as Non-traditional for Women *

### Agricultural

Agricultural Supplies/Services
Agricultural Mechanics
Agricultural Products
Agricultural Production
Agricultural Resources
Forestry
Agriculture, Other

### Distributive

Automotive Sales
Building, Hardware
Petroleum

### Health

None

### Home Economics, Gainful & Non-Gainful

None

### Business and Office

None

### Technical

Chemical Technology
Aeronautical Technology
Architectural Technology
Automotive Technology
Civil Technology
Electrical Technology
Electronic Technology
Electromechanical Technology
Envirnomental Control
Industrial Technology
Instrumentation Technology
Mechanical Technology
Metallurgical Technology
Commercial Pilot Training
Fire and Fire Safety Technology
Forestry Technology
Oceanographic Technology
Air Polution
Miscellaneous Technology, Other

### Technical (continued)

Police Science
Water and Waste Water Technology

### Trade and Industrial (T&I)

Plastics Occupations
Air Conditioning
Aviation
Appliance Repair
Body and Fender Repair
Auto Mechanics & Other Auto Trng.
Blueprint Reading
Business Machine Maintenance
Commercial Fishery Occupations
Carpentry
Custodial Services
Diesel Mechanics
Drafting Occupations
Electronic Occupations
Graphic Arts Occupations
Law Enforcement Training
Metalworking Occupations
Machine Shop
Machine Tool Operations
Welding and Cutting
Tool and Die Making
Metallurgy Occupations
Small Engine Repair
Woodworking Occupations
Masonry
Plumbing and Pipefitting
Leather Working
Firefighter Training
Instrument Maintenance Repair
Maritime Occupations
Refrigeration
Management Development
Sheet Metal
Other Metalworking
Barbering
Stationary Energy
Atomic Energy
Electricity
Other Construction
Electrical Occupations
Trade and Industrial Occupations, Other

* Non-traditional (NT) program = program in which women students enrolled nationally in 1972 comprised 0.0 to 25.0% of all enrolled students. Because of enrollment shifts, several programs would have moved from Non-traditional to Mixed, or from Traditional to Mixed since 1972. The categories have been kept constant, however, so that such changes are not obscured.

## Vocational Programs Designated as Mixed *

### Agricultural

Ornamental Horticulture

### Distributive

Industrial Marketing
Transportation
International Trade
Advertising Services
Finance and Credit
Food Services
General Merchandise Sales
Real Estate Sales
Recreation and Tourism
Wholesale Trade, Other
Retail Trade, Other
Food Distribution
Hotel and Lodging
Insurance
Personal Services
Distributive Education, Other
Apparel and Accessories
Home Furnishings
Floristry

### Health

Physical Therapy
Radiologic Technology
Mental Health Technology
Inhalation Therapy Technology
Dental Laboratory Technology
Opthalmic
Environmental Health
Nuclear Medical Technology
Dental, Other
Miscellaneous Health Occupations, Other

### Health (continued)

Mortuary Science
Medical Emergency Technician

### Home Economics, Non-Gainful

Family Relations

### Home Economics, Gainful

None

### Business and Office

Accounting and Computing Occupations
Personnel Training and Related Occupations
Information Communications
Materials Support
Office Occupations, Other
Programmers
Computer and Console Operators
Other Business Data Processing
Supervisory and Administrative Management

### Techical

Scientific Data Processing

### Trade and Industrial (T&I)

Other Public Services
Commercial Art Occupations
Quantity Food Occupations
Upholstering
Commerical Photography Occupations
Fabric Maintenance Services

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* Mixed (M) program = program in which women students enrolled nationally in 1972 comprised 25.1 to 75.0% of all enrolled students. Because of enrollment shifts, several programs would have moved from Non-traditional to Mixed, or from Traditional to Mixed since 1972. The categories have been kept constant, however, so that such changes are not obscured.

## Vocational Programs Designated as Traditional for Women *

**Agricultural**

None

**Distributive**

None

**Health**

Dental Assistant
Dental Hygienist (Associate Degree)
Nursing (Associate Degree)
Other Nursing
Practical (Voc.) Nursing
Nursing Assistant (Aide)
Occupational Therapy
Medical Assistant
Medical Lab. Assistant
Rehabilitation, Other
Radiologic, Other
Health Aide
Medical Lab. Techn., Other
Surgical Technology

**Home Economics, Non-Gainful**

Comprehensive Homemaking
Child Development
Clothing and Textiles
Consumer Education
Food and Nutrition

**Home Economics, Non-Gainful (continued)**

Housing and Home Furnishing
Home Management
Other Non-gainful Consumer and Homemaking

**Home Economics, Gainful**

Institutional & Home Management
Clothing Mgt., Prod., & Services
Home Furnishing, Eqpt., & Services
Care and Guidance of Children
Food Mgt., Production, & Services
Other Occupational Preparation

**Business and Office**

Filing and Office Machine Operations
Stenographic, Secretarial, and Related Occupations
Typing and Related Occupations

**Technical**

None

**Trade and Industrial (T&I)**

Cosmetology
Textile Production and Fabrication
Other Personal Services

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* Traditional (T) program = program in which women students enrolled nationally in 1972 comprised 75.1 to 100% of all enrolled students. Because of enrollment shifts, several programs would have moved from Non-traditional to Mixed, or from Traditional to Mixed since 1972. The categories have been kept constant, however, so that such changes are not obscured.

Appendix B

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, United States

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 5.4 | 8.8 | 11.1 |
| Trades and Industry | 5.4 | 7.8 | 9.5 |
| Agriculture | 3.9 | 9.6 | 13.1 |
| Distributive Education | 14.6 | 23.4 | 16.1 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 8.6 | 12.2 | 16.7 |
| Mixed: Total Gainful & Non-gainful | 52.8 | 53.1 | 56.8 |
| Gainful Only | 50.5 | 51.8 | 55.7 |
| Trades and Industry | 40.6 | 38.0 | 46.7 |
| Agriculture | 26.9 | 40.5 | 45.0 |
| Distributive Education | 46.3 | 48.7 | 52.2 |
| Health | 63.2 | 56.1 | 57.7 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 56.8 | 57.1 | 60.5 |
| Technical | 31.8 | 46.6 | 46.2 |
| Home Economics (Non-gainful) | 73.8 | 72.8 | 69.8 |
| Traditional: Total Gainful & Non-gainful | 90.4 | 84.7 | 83.4 |
| Gainful Only | 86.7 | 85.8 | 85.7 |
| Trades and Industry | 87.1 | 85.1 | 86.2 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 90.9 | 89.2 | 89.3 |
| Home Economics (Gainful) | 86.1 | 84.7 | 82.5 |
| Business | 86.0 | 85.4 | 85.6 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 93.3 | 83.7 | 81.3 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

NUMBER AND CHANGE IN NUMBER OF TOTAL, MEN AND WOMEN STUDENTS ENROLLED IN VOCATIONAL EDUCATION (GAINFUL) 1972-78

(in thousands)*

| State | Year | Number of Total Students | Number of Men Students | Number of Women Students | Number of Gain/Loss | | |
|---|---|---|---|---|---|---|---|
| | | | | | All Students 1972-78 | Men Students 1972-78 | Women Students 1972-78 |
| ALABAMA | 1972 | 114.6 | 82.8 | 31.8 | 40.4 | 22.3 | 18.1 |
| | 1978 | 155.0 | 105.1 | 49.9 | | | |
| CALIFORNIA | 1972 | 1,012.4 | 684.3 | 433.2 | 530.4 | 184.3 | 346.1 |
| | 1978 | 1,542.8 | 763.5 | 779.3 | | | |
| FLORIDA | 1972 | 370.2 | 199.2 | 171.0 | 229.8 | 94.5 | 135.3 |
| | 1978 | 599.9 | 293.6 | 306.3 | | | |
| GEORGIA | 1972 | 223.1 | 127.8 | 95.3 | -28.2 | 37.3 | 9.1 |
| | 1978 | 194.9 | 90.5 | 104.4 | | | |
| IDAHO | 1972 | 20.2 | 12.6 | 7.6 | 10.7 | 6.2 | 4.5 |
| | 1978 | 30.8 | 18.7 | 12.1 | | | |
| ILLINOIS | 1972 | 567.4 | 316.1 | 251.3 | 98.6 | 45.8 | 52.8 |
| | 1978 | 666.0 | 361.9 | 304.1 | | | |
| NEW HAMPSHIRE | 1972 | 16.5 | 8.7 | 7.8 | 3.1 | 4.0 | -0.9 |
| | 1978 | 19.6 | 12.6 | 7.0 | | | |
| NEW MEXICO | 1972 | 35.8 | 16.8 | 19.0 | 1.5 | 3.4 | -1.5 |
| | 1978 | 37.7 | 20.1 | 17.6 | | | |
| NEW YORK | 1972 | 546.8 | 266.4 | 280.4 | 230.7 | 83.6 | 147.1 |
| | 1978 | 777.5 | 349.9 | 427.6 | | | |
| OHIO | 1972 | 250.6 | 160.4 | 90.2 | 108.8 | 56.9 | 51.9 |
| | 1978 | 359.4 | 217.3 | 142.1 | | | |
| OKLAHOMA | 1972 | 85.4 | 62.4 | 23.0 | 60.8 | 38.8 | 22.0 |
| | 1978 | 146.3 | 101.3 | 45.0 | | | |

* Numbers may not add because of rounding

NUMBER AND CHANGE IN NUMBER OF TOTAL, MEN AND WOMEN STUDENTS ENROLLED IN VOCATIONAL EDUCATION (GAINFUL) 1972-78

(in thousands)*

| State | Year | Number of Total Students | Number of Men Students | Number of Women Students | Number of Gain/Loss | | |
|---|---|---|---|---|---|---|---|
| | | | | | All Students 1972-78 | Men Students 1972-78 | Women Students 1972-78 |
| OREGON | 1972 | 73.2 | 41.8 | 31.4 | 44.7 | 24.0 | 20.7 |
| | 1978 | 117.9 | 65.8 | 52.1 | | | |
| PENNSYL-VANIA | 1972 | 270.8 | 161.2 | 109.6 | 94.5 | 45.7 | 48.8 |
| | 1978 | 365.3 | 207.0 | 158.3 | | | |
| TEXAS | 1972 | 349.0 | 267.5 | 81.5 | 209.2 | 83.4 | 125.8 |
| | 1978 | 558.3 | 351.0 | 207.3 | | | |
| WYOMING | 1972 | 11.0 | 5.3 | 5.7 | 19.5 | 12.9 | 6.5 |
| | 1978 | 30.4 | 18.1 | 12.3 | | | |
| TOTAL 15 STATES | 1972 | 3,982.6 | 2,343.8 | 1,638.8 | 1,612.8 | 630.3 | 982.5 |
| | 1978 | 5,595.4 | 2,974.1 | 2,621.3 | | | |
| TOTAL-U.S. | 1972 | 7,240.8 | 4,266.4 | 2,974.4 | 3,172.1 | 1,379.6 | 1,792.5 |
| | 1978 | 10,412.9 | 5,646.1 | 4,766.8 | | | |

* Numbers may not add becuase of rounding

Appendix D

## Analyses of State Reports and Enrollment Data

### ALABAMA

### Summary Analysis

#### State Reports

Little evidence existed to show that Alabama had addressed the issue of sex equity in any serious way except to include the essential verbiage in the State Plan. The state was not responsive to its SACVE recommendations or to its public hearing comments.

#### Enrollment Data

Alabama was only slightly lower than the national level in the percent women enrolled in Non-traditional courses in 1972.. The enrollment of women in such courses did not increase much in the following years. Thus, it was significantly below the U.S. average by 1978. The number of women enrolled in Mixed courses increased, and both the number and percent of men enrolled in Consumer and Homemaking courses increased.

## Analysis of Alabama State Reports

### SACVE Recommendations

Need to double the efforts to attract women to historically non-traditional vocational offerings, particularly at the secondary school level.

> State response. All vocational programs are available to all students.

### Public Hearing Comments

Concern that more funds be budgeted; only $50,000 allocated and $17,558 expended.

> State response. Other services available; no need to provide additional funds. A definite plan is followed for workshops, analyzing data, doing on-site evaluations of local school programs, communicating with interest groups, reviewing grants, and monitoring hiring procedures.

Need for child care services.

> State response. Child care can be funded at the local level. Fiscal constraints make it impossible to fund at state level.

Counseling needed for displaced homemakers.

> State response. Most secondary schools have counseling services available for women as well as men students.

### BOAE Staff Reports

No problems related to sex equity were identified.

### MERC/Q Findings

Whether state was in compliance regarding duties carried out by Sex Equity Coordinator and role of the State Advisory Council was to be determined.

### Program Descriptions

Review of 565 local programs indicated the major weakness in local programs was that teachers were not aware of and had not moved to eliminate sex bias and occupational stereotyping.

Funding of up to $500 each for 14 model programs in vocational education. Two model programs to be funded from each of the seven occupational areas. (No funds, however, were actually allocated for this purpose.)

Displaced homemakers. Proposed afternoon and evening projects, short courses for job seeking skills, counseling, and some urban adult programs. (No funds.)

Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Sex Bias Personnel | $ 50,000 | $ 17,588 |
| No other funds allocated | | |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Alabama

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 2.7 | 4.6 | 5.8 |
| Trades and Industry | 3.0 | 5.4 | 6.4 |
| Agriculture | 2.6 | 3.6 | 4.9 |
| Distributive Education | 5.7 | 12.6 | 19.5 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 0.4 | 1.7 | 2.6 |
| Mixed: Total Gainful & Non-gainful | 49.9 | 45.8 | 57.8 |
| Gainful Only | 49.3 | 45.5 | 57.7 |
| Trades and Industry | 25.7 | 15.5 | 28.1 |
| Agriculture | 38.8 | 38.5 | 44.7 |
| Distributive Education | 50.5 | 53.1 | 52.6 |
| Health | 57.5 | 68.5 | 77.8 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 66.1 | 72.0 | 77.6 |
| Technical | 54.1 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 89.6 | 71.6 | 91.3 |
| Traditional: Total Gainful & Non-gainful | 93.8 | 87.7 | 86.3 |
| Gainful Only | 89.3 | 87.9 | 89.3 |
| Trades and Industry | 82.6 | 78.1 | 85.5 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 94.7 | 91.4 | 90.1 |
| Home Economics (Gainful) | 86.7 | 84.3 | 86.7 |
| Business | 90.9 | 90.4 | 90.4 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 92.2 | 82.2 | 80.7 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of Alabama Detailed Enrollment Data, 1972-1978

### Non-Traditional

Agricultural. Total loss of 10,000 students from 1972-1978; small rise in number and percent of women students:

| % Women | 1972 | 1978 |
|---|---|---|
| Alabama | 2.7% | 5.8% |
| U.S. | 5.4 | 11.1 |

Trade and Industrial. Major gain of 2,300 total students over the six years; women increased from 1,000 in 1972 to 4,000 in 1978.

| Detailed programs | 1972 | 1978 |
|---|---|---|
| Drafting | 6.8% | 12.9% |
| Management Development | 14.2 | 34.5 |
| Graphic Arts | 17.0 | 26.1 |

These gains are close to those made nationally in these courses.

### Mixed and Traditional

Business. Expansion in numbers but not in percents. One exception, was a major increase of women in Accounting both in numbers and percent, from 70% in 1972 to 85% in 1978.

Health. Major increase of women in all courses.

Home Economics. Drop in number enrolled in Gainful courses, but a rise in number of Non-gainful courses.

# CALIFORNIA

## Summary Analysis

### State Reports

All local educational agencies were required to give assurances annually that sex bias, sex stereotyping, and sex discrimination would not exist in any vocational education instruction or guidance programs, activities, or support services.

California required mandatory affirmative action plans from LEAs and community colleges and required that goals and timetables be established at the LEA level before funding.

The goals and timetables established by the state required that for each school no more than a specific percent of the student body be enrolled in courses with enrollments of more than 80% of one sex. This would appear to be an inappropriate performance measure, since it: 1) obscures which courses are improving the balance of their enrollments; 2) obscures whether men and/or women are moving into courses Non-traditional for their sex; 3) obscures progress which shows up in numbers but not percent; and 4) can be influenced by an increase in the number of Mixed courses without any change in the balance of enrollments in Traditional courses.

The state established monitoring procedures for LEAs and third party evaluation for all funded projects. Major funding of $753,000 was allocated for grants to overcome sex bias; an additional allocation of $150,000 was made for displaced homemaker projects. All this activity was reflected in the positive state enrollment results. If proportionately similar efforts and allocations were made in other states, similar gains might result.

An emphasis was placed on the development of comparative data on completions vs. enrollments, and dissemination of such data at the local level to the community, the students, and the vocational education staff.

In California, unlike other states, initial action for the elmination of sex bias began at the local level. Each school was required to gather and disseminate data, and to have an affirmative action plan for hiring staff and recruiting students. In addition to the local activities, state level planning and activities to eliminate bias were also carried out.

California was responsive to the SACVE recommendation, but not willing to fund day care or supportive services.

California made funds available for personnel attending sex equity workshops and programs.

Enrollment Data

California's increase of women and men in courses Traditional for the opposite sex was uniform across all occupational training areas. However, it occurred mainly between 1972 and 1976; there were relatively small changes between 1976 and 1978. Additionally, the Non-traditional courses that showed the greatest gains were predominantly the same Non-traditional courses (Drafting, Law Enforcement, etc.) that showed gains throughout the U.S., those without a strong male role image.

## Analysis of California State Reports

### SACVE Recommendations

The Council recommends that the State Board of Education and the Board of Community Colleges carry out an evaluation of the progress of LEAs and the community colleges in eliminating sex bias.

> State response. Greater specificity will be required before LEA plans are approved in future years. 20% of the LEAs and all the community college are being evaluated. Results are not yet available. An external evaluation of each funded project is being undertaken.

The Council recommends that more funds be available for supportive services to women.

> State response. Funds available are minimal; allocation of such funds are optional at the local level.

The Council recommends that funds be available for personnel attending workshops and other sex equity activities.

> State response. $250,000 are being allocated for this purpose.

The Council recommends that criteria be established to determine whether an LEA or community college is in compliance.

> State response. A study to determine such criteria has been funded.

### Public Hearing Comments

No comments related to sex equity were identified.

### BOAE Staff Reports

No sex equity issues were identified.

### MERC/Q Findings

No MERC/Q was conducted for California.

### State Plan

All local educational agencies were required to give assurances annually that sex bias, sex stereotyping, or sex discrimination would not exist in any vocational education instruction or guidance programs, activities, or support services. The following requirements were set forth in the State Plan:

The governing board of each local educational agency that expends funds for vocational education under this state plan should adopt an affirmative action plan for vocational education, or include a section on vocational education in an existing affirmative action plan. The plan should include but not be limited to the following:

- A written policy statement of the district's commitment to (a) equal access of all students who can profit from instruction to vocational education programs, (b) equal opportunity in employment for all qualified persons, and (c) the prohibition of discriminatory practices in vocational education staff employment based on race, national origin, sex, color, religion, age, or disability.

- A provision for determining and comparing the percent of grades 9-12 enrollment in secondary schoools or total full-time enrollment in community colleges that is minority and female enrollment in vocational education programs.

- Procedures and timetables for actively acquiring and making available for student and staff use occupational and career information that is free from racial, ethnic, disability, or sex bias.

- Procedures and timetables for actively providing minority, disabled, and female students with information about occupational opportunities and available vocational preparation, including nontraditional occupations for women.

- Procedures and timetables for comparing the percent of minority, disabled, and female enrollment in vocational education with the percent of minority, disabled and female students who complete vocational and education programs.

- Procedures and timetables for reasonable matching of the percent of minority, disabled, and female enrollment in vocational education programs with the percent of minority, disabled, and female students enrolled in grades 9-12 in secondary schools or enrolled in community colleges.

- A procedure for reporting the results of affirmative action activities annually to the local governing board, the community, the students, and the vocational education staff.

- Assignment of responsibility for implementing the plan.

- Establishment of goals and measurable objectives with a timeline for achievement of the objectives.

California, unlike the states described in the AIR study, wrote its plan in a manner such that the initial actions began with the local level. It required each local school to gather and disseminate data, and have an affirmative action plan for hiring staff and recruiting students. All state level functions were also carried out.

Program Descriptions

The following grants totalling $753,113 were awarded during 1977-78 to support sex equity activities:

To examine the feasibility of developing a training curriculum for poor and minority women to reduce barriers to employment, $65,000.

To motivate girls to prepare for math-related occupations, $15,000.

To develop instructional materials in vocational guidance with emphasis on reduction of sex bias and sex role stereotyping, $14,495.

To develop a vocational guidance and counseling model for disadvantaged women, $56,474.

To train professional staff in techniques for eliminating sex stereotyping in counseling expectant mothers, $96,500.

To eliminate sex bias and sex stereotyping in consumer and homemaking materials, $14,482.

To identify, analyze, and disseminate information about opportunities for males and females in non-traditional occupations, $43,000.

To provide personnel training to both secondary and community college staff in common areas, including elimination of sex bias, sex discrimination, and sex stereotyping, $172,449.

To develop and disseminate a resource list of community and women's organizations, educational institutions, and federally funded projects that address needs of women, $37,854.

To develop an up-to-date handbook for use by vocational education administrators and community groups in the analysis of sex bias problems and to provide training in the use of the handbook, $121,007.

To monitor state progress in eliminating sex bias and to establish a state-wide network for information exchange and a procedure for redress of sex equity grievances, $97,582.

To identify for women emerging occupations in agriculture, $19,270.

The following programs were funded to serve displaced homemakers:

To prepare participants for employment leading to managerial positions in business or public administration, $15,000.

To counsel low-income men and women, primarily single welfare recipients, $15,000.

To provide counseling and placement services, $20,000.

To identify and overcome barriers to employment; to identify existing community courses for clients, $20,000.

To provide workshops, support services, and placement for women in apprenticeships, $20,000.

To provide workshops, recruitment, assessment, support, training, $20,000.

To develop a model of linkage between college and community, providing counseling, placement, follow-up, $20,000.

To provide a comprehensive plan of service for displaced homemakers including counseling and training in non-traditional skills, $20,000.

All programs required an evaluation.

Budget Data

| Purpose | FY 78 Allocated | FY 78 Expended |
|---|---|---|
| Support Services for Women | $ 150,000 | -0- |
| Day Care Services | -0- | -0- |
| Displaced Homemakers | 150,000 | $ 150,000 |
| Sex Equity Personnel | 110,000 | 55,000 |
| Sex Bias Grants | 1,000,000 | 753,113 |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, California

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 5.4 | 15.9 | 15.6 |
| Trades and Industry | 3.6 | 12.2 | 12.0 |
| Agriculture | 16.9 | 29.9 | 30.0 |
| Distributive Education | 11.6 | 8.6 | 22.8 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 8.9 | 20.5 | 20.2 |
| Mixed: Total Gainful & Non-gainful | 56.2 | 56.1 | 58.5 |
| Gainful Only | 44.4 | 51.0 | 52.4 |
| Trades and Industry | 34.1 | 42.6 | 47.7 |
| Agriculture | 23.9 | 37.2 | 38.4 |
| Distributive Education | 40.9 | 47.9 | 51.5 |
| Health | 59.8 | 57.1 | 55.4 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 49.7 | 55.9 | 55.6 |
| Technical | 19.7 | 40.8 | 31.6 |
| Home Economics (Non-gainful) | 87.8 | 77.7 | 71.1 |
| Traditional: Total Gainful & Non-gainful | 94.5 | 83.5 | 80.7 |
| Gainful Only | 96.0 | 84.2 | 83.0 |
| Trades and Industry | 90.3 | 88.2 | 86.3 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 93.2 | 89.7 | 88.1 |
| Home Economics (Gainful) | 88.8 | 84.8 | 84.7 |
| Business | 86.2 | 83.1 | 81.7 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 92.2 | 82.2 | 80.7 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Non-Traditional

California led the U.S. in 1978 in percent women enrolled in every Non-traditional occupational training area:

| | 1978 | |
|---|---|---|
| | U.S. | California |
| Agricultural | 13.1% | 30.0% |
| Technical | 16.7 | 20.2 |
| Trade & Industrial | 9.5 | 12.0 |
| Distributive Education | 16.1 | 22.8 |
| Total | 11.1 | 15.6 |

The number of women in Non-traditional training areas increased by more than 3 times between 1972 and 1976 (no gain between '76 and '78). The total student enrollment in Technical programs dropped; the drop was greater among men than women. In California women increased in Trade & Industrial Non-traditional courses 3.5 times between 1972 and 1978 from 13,700 to 47,800.

Agricultural. Total student enrollment increased by less than 50%; women's enrollment increased 2.5 times. California exceeded the national average for every NT Agricultural program.

Detailed programs. Major increases occurred in each program in both numbers and percent. A major exception was Agricultural Mechanics which reported 2.6% enrolled in 1972 and 6.2% in 1978, but even this was more than U.S. average in 1978.

Technical. Large increases of numbers and percentages between 1972 and 1978, similar to the national growth.

Trade & Industrial.

Detailed programs. Major gains in numbers as well as percents occurred in the following programs:

| | 1972 | 1978 |
|---|---|---|
| Drafting | 5.3% | 16.7% |
| Electroni- | 6.3 | 13.9 |
| Management Development | 12.7 | 35.7 |
| Graphic Arts | 9.6 | 26.5 |
| Law Enforcement | 11.2 | 23.9 |

In addition, the following programs had large increases in numbers if not in percentages:

| | 1972 | 1978 |
|---|---|---|
| Auto Mechanics | 1.7% | 5.8% |
| Woodworking | 4.6 | 8.5 |
| Construction, Other | 2.6 | 4.6 |

Mixed and Traditional

Business

Mixed. Enrollment of women increased in numbers and percent, from 54,900 to 130,000 and from 49.7% to 55.6%.

Detailed programs

| | 1972 | 1978 |
|---|---|---|
| Accounting and Computing | 28,000 | 58,000 |
| Supervisory and Administrative | 4,000 | 15,000 |
| Personnel | 2,000 | 11,000 |

Traditional. Enrollment of women increased from 23,500 in 1972 to 310,000 in 1978 but their percent dropped from 86.2% to 81.7% because of an even greater increase in the number of men.

Health

Mixed. Numbers of women doubled but percent decreased:

| Women | 1972 | 1978 |
|---|---|---|
| Percent | 59.8% | 55.4% |
| Number | 6,400 | 13,500 |

Traditional. Major rise in numbers of women but slight drop in percent.

Distributive Education. Major rise in numbers; small rise in percent, with the following exceptions:

Detailed programs

| | 1972 | 1978 |
|---|---|---|
| General Merchandise | 48.4% | 60.9% |
| Real Estate | 31.3 | 41.7 |
| Tourism | 49.9 | 64.3 |
| Insurance | 14.8 | 39.3 |
| Apparel | 66.7 | 87.1 |

Trade & Industrial. One Mixed program, Quantity Foods, had a major increase in both numbers and percent.

Home Economics. Both Gainful and Non-Gainful expanded in numbers between 1972 and 1978 in both the U.S. and in California, and the drop in percentage points was virtually the same:

| % Women | 1972 | 1978 |
|---|---|---|
| California | 91.5% | 80.8% |
| U.S. | 91.6 | 80.7 |

# FLORIDA

## Summary Analysis

### State Reports

It was difficult to analyze the Florida reports and to determine which programs were being contemplated and which were actually in progress.

Enrollment results were positive, but the activities of the state to achieve the results were difficult to ascertain.

### Enrollment Data

The percentage of women in Non-traditional training was higher than the percentage in the U.S. in every program except the small Non-traditional Distributive Education program.

Florida started with a higher level of women in Non-traditional and Mixed occupational training areas in 1972 and remained in 1978 a little above the U.S. in almost all training areas.

Among all courses that are Traditional for women, only in Non-gainful Home Economics did men show a gain similar to the national increase.

The state had a generally positive picture of enrollment of women in all programs, with a major expansion in numbers, but a relatively small gain in percentages.

## Analysis of Florida State Reports

### SACVE Recommendations

Economically disadvantaged individuals under 20 years of age could participate in post-secondary vocational education with a minimum of financial assistance if day care services were provided.

State response. Assistance for day care will be explored.

A periodic review should be conducted of the impact of vocational and technical education on inequality.

State response. Staff has been assigned to monitor vocational education programs to ensure compliance with Title IX legislation.

### Public Hearing Comments

No comments related to sex equity were identified.

### BOAE Staff Report

No problems related to sex equity were identified.

### MERC/Q Findings

The state is not in compliance on review of Title IX evaluations. The local Title IX self-evaluations had not been reviewed during 1978; review is underway during FY '79.

### Programs Descriptions

Programs of awareness, improved counseling, job hunting skills, placement, follow-up for displaced homemakers; and establishment of community information and outreach.

### Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Full-time Personnel | $50,000 | $21,127 |
| Displaced Homemakers | 61,240* | 6,000 |
| Staff Development and Training for Guidance Personnel | 22,847 | No Data |
| Procurement of Personnel from Business and Industry | 50,000 | No Data |
| Elimination of Sex Bias | 61,824 | No Data |

* Also reported as $150,000.

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Florida

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 9.3 | 11.7 | 12.9 |
| Trades and Industry | 7.7 | 10.8 | 10.3 |
| Agriculture | 7.7 | 15.6 | 17.7 |
| Distributive Education | 7.2 | 8.4 | 9.7 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 16.0 | 12.7 | 18.7 |
| Mixed: Total Gainful & Non-gainful | 56.2 | 56.1 | 58.5 |
| Gainful Only | 56.0 | 55.3 | 57.7 |
| Trades and Industry | 34.3 | 48.0 | 52.0 |
| Agriculture | 15.3 | 27.7 | 30.7 |
| Distributive Education | 44.7 | 53.4 | 55.8 |
| Health | 60.1 | 56.6 | 54.8 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 73.9 | 63.2 | 65.7 |
| Technical | 54.3 | 0.0 | 50.5 |
| Home Economics (Non-gainful) | 81.9 | 69.0 | 70.3 |
| Traditional: Total Gainful & Non-gainful | 90.3 | 86.2 | 84.0 |
| Gainful Only | 89.7 | 87.4 | 85.7 |
| Trades and Industry | 83.7 | 87.9 | 84.8 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 93.2 | 89.0 | 90.1 |
| Home Economics (Gainful) | 86.8 | 83.9 | 80.4 |
| Business | 90.8 | 88.5 | 87.2 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 91.1 | 84.2 | 81.3 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of Florida Detailed Enrollment Data, 1972-1978

### Non-Traditional

Agricultural. Major rise in numbers and percent of women:

| % Women | 1972 | 1978 |
|---|---|---|
| Florida | 7.7% | 17.7% |
| U.S. | 3.9 | 13.1 |

In all courses except Agricultural Mechanics there was a substantial rise in the numbers and percent of women in Non-traditional Agriculture.

Technical. Large expansion in numbers of both men and women. Percent women was far above national average in 1972, but increased only slightly by 1978:

| % Women | 1972 | 1978 |
|---|---|---|
| Florida | 16.0% | 18.7% |
| U.S. | 8.6 | 16.7 |

Detailed programs

| | % Women | 1972 | 1978 |
|---|---|---|---|
| Police Science | Florida | 10.4% | 22.8% |
| | U.S. | 9.5 | 24.3 |

Trades and Industrial. Non-traditional enrollment was high:

| # Students | 1972 | 1978 |
|---|---|---|
| All Students | 76,000 | 129,600 |
| Women | 4,300 | 10,000 |

Detailed programs. Auto Mechanics had a large increase in numbers of women but no increase in percent. Major gains occurred in:

| | 1972 | 1978 |
|---|---|---|
| Drafting | 6.2% | 19.4% |
| Graphic Arts | 14.8 | 30.9 |
| Woodworking | 5.1 | 17.3 |

### Mixed and Traditional

#### Business

Mixed. Major expansion of numbers from 50,000 to 72,700 but a drop in percent from 73.9% in 1972 to 65.7% in 1978.

Detailed programs. Tripling of women in Accounting and Computing. Huge expansion in Supervision and Administration from 600 in 1972 to 7,100 in 1978.

Traditional. Numbers almost doubled but there was a small drop in percent. Major decrease in percent women in Typing.

Distributive Education

Mixed. Major expansion in numbers and percent:

| % Women | 1972 | 1978 |
|---|---|---|
| Florida | 44.7% | 55.8% |
| U.S. | 46.3 | 52.2 |

Detailed programs. Expansion in numbers and percent in each program except Food Distribution and Home Furnishings.

Health

Mixed. Numbers of women enrolled increased, but percent dropped.

Detailed programs. Inhalation Therapy had an increase in numbers and percent (31.7% in 1972 to 52.6% in 1978).

Traditional. Major expansion in numbers; slight drop in percent.

Home Economics. Expansion in numbers; drop in percent.

Detailed programs. Non-gainful Home Economics showed a drop in numbers and percent, similar to U.S.

| % Women | 1972 | 1978 |
|---|---|---|
| Florida | 91.1% | 81.3% |
| U.S. | 93.3 | 81.3 |

# GEORGIA

## Summary Analysis

### State Reports

Problems were clearly identified by the SACVE, BOAE staff report, and MERC/Q but there was only one state response. The Plan showed some small effort to impact other vocational education activities, but without any commitment of funds.

### Enrollment Data

Georgia showed relatively small gains in Non-traditional enrollment of women. Georgia had a major drop in Agricultural enrollment, presumably the result of courses closing, and no major increase of women in any other Non-traditional programs.

More men were enrolled in Business courses Traditional for women than were nationally, but increased enrollment of men in other courses Traditional for women showed no pattern.

There was an increase of women in Mixed Business and Health courses similar to the U.S. increase.

## Analysis of Georgia State Reports[1]

### SACVE Recommendations

The Council finds that recent studies indicate that a de facto system of sex stereotyping persists in Georgia's vocational schools.

The Council recommends that funds be used to increase the number of women instructors involved in training individuals for non-traditional jobs.

The Council believes that the $50,000 Federal minimum allocated for this office will be insufficient when compared to the magnitude of the task to be accomplished. It recommends that additional Federal funds (and/or a state supplement) be given to this office.

The Council recommends that funds for day care centers be included in the State plan which would make it more feasible for women to receive vocational training and find a job.

> State response. Senior Assistant Attorney General of the state finds that education funds cannot be used for child care. Without increased funding, the cost of supportive services would be prohibitive.
>
> No other state response.

### Public Hearing Comments

No comments related to sex equity were identified.

### BOAE Staff Report

Prohibition against sex discrimination has not been included in every publication. Students and applicants for staff positions are treated differently on the basis of sex.

> Required action. The state should undertake actions to complete the studies recommended in the Title IX self-evaluation relating to recruitment efforts and merit system lists.

### MERC/Q Findings

No evidence that the requirement for monitoring hiring, firing, and promotion procedures has been carried out by the Sex Equity Coordinator, and the job description does not include this responsibility.

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[1] The FY '79 Annual Plan and FY '78 Accountability Report for Georgia were used for this analysis since those were the most recent on file in BOAE at the time of this study.

No funds were expended for special programs and placement services for displaced homemakers.

Only $17,891 of the mandated $50,000 was spent in Fiscal Year 1978; $32,109 should be carried over to Fiscal Year 1979.

Program Descriptions

Twenty-four area vocational-technical schools will participate in consumer education projects at the post-secondary and adult levels including courses for displaced homemakers in managing the dual role of homemaker/wage earner.

A minimum of one full-time Student Personnel Specialist has been employed at each area vocational-technical school to provide counseling and guidance services to those served, including displaced homemakers.

The guidance function will be enhanced by learning coordinators and by developing a curriculum free of sex role stereotyping.

An individualized instruction project has the elimination of sex bias as a major goal.

V-TECS catalogs have included a section on the elimination of sex bias.

All curriculum development projects are eliminating sexist terms and visuals.

Displaced homemakers. Programs are in planning stages only.

No special funding was made available for any of the above projects.

Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Sex Equity Personnel | $ 50,000 | $ 17,891 |
| Displaced Homemakers | 98,721 | -0- |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Georgia

| | 1972 | 1976 (percent) | 1978 |
|---|---|---|---|
| Non-traditional: Total | 5.1 | 4.8 | 8.0 |
| Trades and Industry | 6.6 | 5.8 | 8.2 |
| Agriculture | 2.9 | 3.2 | 7.4 |
| Distributive Education | 7.6 | 6.2 | 10.5 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 6.6 | 7.0 | 6.4 |
| Mixed: Total Gainful & Non-gainful | 54.7 | 47.6 | 58.3 |
| Gainful Only | 54.7 | 47.2 | 58.3 |
| Trades and Industry | 40.6 | 39.6 | 35.2 |
| Agriculture | 32.3 | 33.7 | 40.8 |
| Distributive Education | 47.7 | 38.8 | 49.7 |
| Health | 63.9 | 58.4 | 73.1 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 59.8 | 58.6 | 73.3 |
| Technical | 12.0 | 48.4 | 63.9 |
| Home Economics (Non-gainful) | 81.0 | 84.9 | 0.0 |
| Traditional: Total Gainful & Non-gainful | 87.1 | 78.2 | 80.1 |
| Gainful Only | 81.3 | 79.2 | 78.5 |
| Trades and Industry | 78.5 | 73.4 | 63.9 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 87.8 | 85.9 | 100.0 |
| Home Economics (Gainful) | 92.2 | 88.3 | 86.2 |
| Business | 78.4 | 77.8 | 78.2 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 92.7 | 76.9 | 82.0 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of Georgia Detailed Enrollment Data, 1972-1978

### Non-Traditional

Agricultural. Large drop in total students enrolled from 29,000 in 1972 to 12,000 in 1978; increase in percent women was much less than U.S:

| % Women | 1972 | 1978 |
|---|---|---|
| GA | 2.9% | 7.4% |
| U.S. | 2.5 | 13.1 |

Detailed programs. Major increase of women in Forestry, almost as great as U.S:

| % Women | 1972 | 1978 |
|---|---|---|
| GA | 0.9% | 11.7% |
| U.S. | 3.9 | 13.2 |

Number of women in Agriculture Mechanics dropped; but percent rose more than the U.S.:

| % Women | 1972 | 1978 |
|---|---|---|
| GA | 1.3% | 7.3% |
| U.S. | 1.1 | 4.9 |

Technical. The program is small with little percent change from 1972 to 1978, 6.6% to 6.4%.

Trade & Industrial. Little change in numbers or percent from 1972 to 1978, 6.6% to 8.2%.

Detailed programs. Women in Auto Mechanics increased slightly in percent, 3.0% to 5.6%, and in numbers, 160 to 506. In Drafting they doubled in numbers and increased in percent, 5.8% to 17.6%.

### Mixed

Business. Women increased in numbers and made major percent gains in every detailed program, much more than U.S. average:

| % Women | 1972 | 1978 |
|---|---|---|
| GA | 59.8% | 73.3% |
| U.S. | 56.8 | 60.5 |

Distributive Education. Numbers of women were down; percents unchanged.

Detailed programs. Women in Transportation increased in numbers but not in percent. In Hotel and Lodging, and Real Estate they had a major drop in numbers.

Health. Women increased in numbers and percent from 63.9% in 1972 to 73.1% in 1978.

Traditional

Business. Women increased in numbers but not percent.

Detailed programs

| | % Women | 1972 | 1978 |
|---|---|---|---|
| Stenography | GA | 92.7% | 78.9% |
| | U.S. | 93.2 | 94.0 |

Health. Numbers of women decreased but percent went up from 87.8% to 100.0%.

IDAHO

Summary Analysis

State Reports

Idaho was one of the few small states that actually spent as much as 86% of its funds allocated to sex equity staff. It was also one of the very few states that paid for school personnel participation in sex equity training.

The state had little on equity in its Plan, and little was required of the LEAs.

Although there was a large increase in the numbers of men enrolled in Consumer and Homemaking courses, this was not given major emphasis in the State Plan.

Enrollment Data

In almost all training areas Idaho vocational education courses remained more segregated in 1978 than national averages, with the exception of Gainful Home Economics. There was an increase of the percent of men in those courses but this still represented only a small number of men.

Although the state was still well below the levels of enrollment of women that had been achieved nationally, women made major gains in Non-traditional training from 1972 to 1976 and from 1976 to 1978.

There was an increase of men in Home Economics, both Non-gainful and Gainful.

## Analysis of Idaho State Reports

### SACVE Recommendations

No recommendations on sex equity were identified.

### Public Hearing Comments

No comments related to sex equity were identified.

### BOAE Staff Report

The Accountabililty Report does not describe the uses of funds for actions to be taken to overcome sex discrimination and sex stereotyping in state and local vocational education programs or incentives to encourage non-traditional enrollments. There is no evidence that model programs to reduce sex bias and sex stereotyping are being developed.

### MERC/Q Findings

The MERC/Q was conducted, but report was not released.

### Program Descriptions

Provide reimbursement for travel and per diem at state rates to persons attending special programs on sex equity.

Displaced homemakers. Fund a center at an AVTS to develop individual competencies, job/school readiness, referrals, placement, and follow-up; to be operational in 1980.

### Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Sex Bias | $ 50,000 | $ 43,177 |
| Displaced Homemakers | 10,000 | 5,000 |
| Mini-Grants for Sex Equity | 5,000 | No data |
| Sex Equity Regional Conferences | 5,000 | No data |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Idaho

| | 1972 | 1976 (percent) | 1978 |
|---|---|---|---|
| Non-traditional: Total | 1.9 | 5.7 | 7.4 |
| Trades and Industry | 2.8 | 4.1 | 5.3 |
| Agriculture | 1.0 | 8.3 | 10.9 |
| Distributive Education | 7.0 | 12.5 | 23.0 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 1.5 | 1.5 | 6.4 |
| Mixed: Total Gainful & Non-gainful | 58.7 | 60.5 | 58.2 |
| Gainful Only | 53.7 | 58.7 | 57.2 |
| Trades and Industry | 63.5 | 21.2 | 52.5 |
| Agriculture | 6.1 | 47.5 | 52.0 |
| Distributive Education | 48.6 | 50.1 | 51.0 |
| Health | 15.6 | 83.0 | 82.7 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 70.9 | 70.0 | 73.8 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 94.6 | 83.1 | 70.4 |
| Traditional: Total Gainful & Non-gainful | 93.3 | 78.5 | 81.4 |
| Gainful Only | 94.0 | 82.2 | 88.3 |
| Trades and Industry | 93.7 | 92.1 | 94.7 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 98.5 | 71.5 | 96.8 |
| Home Economics (Gainful) | 71.0 | 34.6 | 55.3 |
| Business | 94.3 | 93.2 | 90.4 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 93.1 | 77.3 | 79.0 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Non-Traditional

The programs were small, and relatively small gains were made in most courses.

Agricultural. Percent women increased from 1.0% in 1972 to 10.9% in 1978.

Detailed programs. Agricultural Production showed steady growth in numbers and percent of women from 0.8% in 1972 to 11.1% in 1978.

Technical. Only 3 courses enrolled women, for a total of 29 women by 1978.

Trades & Industrial. Percent women increased from 2.8% in 1972 to 5.3% in 1978, far below the national increase. The programs were small, so women's gains represented very small numbers.

## Mixed

Business. Numbers and percent of women enrolled increased.

Detailed programs. Women made gains in Mixed Accounting and Computing.

# ILLINOIS

## Summary Analysis

### State Reports

Reporting was mainly on program components. It was difficult to determine whether there were changes in institutional behavior at the state or local level. In order to evaluate this state program it should be reviewed at the local level.

### Enrollment Data

Non-traditional Trade and Industrial was higher than U.S., but overall Illinois had smaller increases in Non-traditional enrollment of women than the U.S. The major gains for women were mainly in the Trade and Industrial courses in which women made gains nationally - Drafting and Law Enforcement.

Changes in Mixed enrollment were erratic, varying by both occupational training area and detailed program.

For men the major gains were in Home Economics.

## Analysis of Illinois State Reports

### SACVE Recommendations

No recommendations on sex equity were identified.

### Public Hearing Comments

No comments related to sex equity were identified.

### BOAE Staff Report

No sex equity issues were identified.

### MERC/Q Findings

No MERC/Q was conducted for Illinois.

### Program Descriptions

Each project assisted with funds available under the Vocational Education Act was required to include a component in its proposal dealing with evaluation of the elimination of racial and sex bias and support for equal educational opportunity in the project. The results were to be utilized in establishing the state's funding priorities:

> In-service training for state staff to develop awareness of sex bias in vocational education, and materials and techniques available to assist LEAs in eliminating sex role stereotyping.
>
> Program to acquaint counselors with the changing work patterns of women, ways of overcoming sex stereotyping, and ways of assisting girls and women in selecting careers solely on their occupational needs and interests; and to develop improved career counseling materials which are free of sex stereotyping.
>
> Resource package to assist local educational agencies in implementing in-service activities to overcome sex discrimination and sex bias. In FY 1978, project personnel focused on a needs assessment process for the design and development of the resource package. Only one phase of project funded.
>
> Development or adaptation of materials, resources, and services to LEAs to assist in overcoming sex discrimination and sex stereotyping. Projected outcome: 20 in-service programs for local educators.

Dissemination of materials to LEAs for conducting in-service activities with their staff, students, and community for eliminating sex bias in vocational education. 10 workshops to assist local educational agencies to conduct local in-service training in sex equity.

Support to LEAs which develop model exemplary programs for the elimination of sex discrimination and sex bias in vocational education.

Activities to eliminate sex stereotyping in written materials, counseling activities, and instruction of students at all educational levels.

Program to prepare occupational materials package for the elementary level, to assist in eliminating sexism from student's acquisition of occupational data. (No submission for funding.)

Grants for improved curriculum materials for new and emerging job fields, including a review and revision of any curricula developed to assure that such curricula do not reflect stereotypes based on sex, race, or national origin.

Development of curriculum, and guidance and testing materials designed to overcome sex bias in vocational education programs and support services designed to enable teachers to meet the needs of individuals enrolled in programs traditionally limited to members of the opposite sex.

Displaced homemakers. Two centers funded and operating. No detailed description.

Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Sex Equity Staff (two professionals and one support staff) | $ 50,000 | $ 51,956 |
| Displaced Homemakers | 275,000 | 34,350 |
| Sex Bias Grants | 230,500 | 102,660 |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Illinois

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 5.9 | 5.8 | 7.1 |
| Trades and Industry | 5.9 | 4.9 | 11.0 |
| Agriculture | 3.7 | 11.1 | 9.4 |
| Distributive Education | 14.0 | 14.3 | 7.5 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 11.3 | 6.7 | 9.5 |
| Mixed: Total Gainful & Non-gainful | 49.7 | 49.9 | 52.7 |
| Gainful Only | 48.9 | 49.7 | 52.4 |
| Trades and Industry | 52.6 | 46.3 | 51.7 |
| Agriculture | 30.7 | 42.1 | 45.6 |
| Distributive Education | 41.1 | 46.4 | 48.2 |
| Health | 71.2 | 60.6 | 63.8 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 51.0 | 51.5 | 54.3 |
| Technical | 27.6 | 0.0 | 22.2 |
| Home Economics (Non-gainful) | 64.2 | 74.9 | 68.5 |
| Traditional: Total Gainful & Non-gainful | 82.6 | 83.0 | 82.5 |
| Gainful Only | 81.7 | 83.1 | 82.5 |
| Trades and Industry | 93.6 | 77.2 | 80.7 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 84.8 | 87.8 | 87.4 |
| Home Economics (Gainful) | 93.1 | 87.0 | 85.1 |
| Business | 77.3 | 80.5 | 80.5 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 92.1 | 82.6 | 82.2 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of Illinois Detailed Enrollment Data, 1972-1978

### Non-Traditional

In 1972 the percent women enrolled was close to the national, but it did not rise by 1978 as much as the national:

| % Women | 1972 | 1978 |
|---|---|---|
| IL | 5.9% | 7.1% |
| U.S. | 5.4 | 11.1 |

Agricultural. Major rise in the percent women from 1972 to 1978, but less than the national:

| % Women | 1972 | 1978 |
|---|---|---|
| IL | 3.7% | 9.4% |
| U.S. | 3.9 | 13.1 |

Total number of students decreased by 3,000 but women increased from 1,000 to 2,400.

Detailed programs. Agricultural Production lost 6,000 total students between 1972 and 1978, but women increased from 500 to 1,300 in the same time period.

Technical. Illinois had an increase in number of women but a drop in percent of women enrolled:

| % Women | 1972 | 1978 |
|---|---|---|
| IL | 11.3% | 9.5% |
| U.S. | 8.6 | 16.7 |

Detailed programs

Architectural Technology - Percent women rose from 7.3% in 1972 to 11.7% in 1978, which was less than the national rise.

Electronic Technology - Increase in percent women was equal to national increase (0.7 to 7.3%).

Trade and Industrial. There was a large increase in percent of women enrolled with an increase of 3,500 in numbers.

Detailed programs

Drafting - Women increased in number and percent (4.8% in 1972 to 8.0% in 1978), while the number of men dropped.

Law Enforcement - Women made major gains in number and percent from 7.9% in 1972 to 27.5% in 1978.

Woodworking - Total students decreased, but the number and percent of women increased.

Mixed and Traditional

Business

Mixed. Women made a large gain in numbers, and increased slightly in percent which was in line with the national average.

Traditional. A small drop in numbers of women, mainly in Typing.

Distributive Education

Mixed. Women increased in numbers but decreased in percent.

Detailed programs. Real Estate, Recreation and Tourism had large increases in both numbers and percents.

Health. The numbers doubled by 1978 and there was a large increase of women in both Mixed and Traditional courses.

Trade and Industrial

Mixed. Women increased in Commercial Art and Photography, and dropped in both number and percent in Quantity Food.

Home Economics. Women increased in numbers and dropped in percent:

| % Women | 1972 | 1978 |
|---|---|---|
| Gainful | 93.0% | 85.0% |
| Non-gainful | 86.0 | 81.0 |

NEW HAMPSHIRE

Summary Analysis

State Reports

The most positive finding was that New Hampshire may be the first state to require knowledge of sex equity issues as part of certification for vocational education teachers. (Action was pending.)

State apparently needed to convert more ideas into action.

Enrollment Data

There was a strong increase of women enrolled in Non-traditional Agricultural, otherwise women made only small gains in Non-traditional courses. The gain in numbers of women in Trade and Industrial was mainly in programs that had major gains nationally - Graphic Arts and Drafting.

The drop in the total number of students in Traditional Business courses was an unusual occurrence, particularly with the simultaneous increase of women in Mixed Business courses.

## Analysis of New Hampshire State Reports

### SACVE Recommendations

No recommendations on sex equity were identified.

### BOAE Staff Report

No sex equity issues were identified.

### MERC/Q Findings

There is no evidence that the State Advisory Council has evaluated vocational education programs, services, and activities, including programs to overcome sex bias.

There is no evidence that the State Advisory Council has assisted the State Board in developing plans for State Board evaluations.

Although several incentives are listed in the State Plan and other incentives are in the developmental stages, no incentives were given for the development of model programs to reduce sex-bias/sex-stereotyping in training and placement.

Although a needs assessment study is in progress, no programs were funded under basic grants to provide vocational education programs for displaced homemakers or to move part-time workers to full-time employment.

State has prepared excellent instrumentation for conducting the local reviews; however, no actual evaluations of local programs have been conducted.

Based on the evidence reviewed, compliance is to be determined. Preliminary fiscal data indicates that less than $25,000 was expended on the Sex Equity Coordinator.

### Program Descriptions

Displaced homemakers. Although $5,000 was allocated for this purpose, no funds were expended. The state attributed this to an inability to determine the population of displaced homemakers.

### Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Sex Bias Personnel | $ 50,000 | $ 20,613 |
| Displaced Homemakers | 5,000 | -0- |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, New Hampshire

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 3.5 | 5.2 | 7.2 |
| Trades and Industry | 3.4 | 3.7 | 5.2 |
| Agriculture | 5.5 | 13.9 | 18.2 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 0.3 | 2.3 | 7.0 |
| Mixed: Total Gainful & Non-gainful | 58.2 | 70.7 | 72.7 |
| Gainful Only | 52.1 | 68.6 | 71.4 |
| Trades and Industry | 52.2 | 55.2 | 57.6 |
| Agriculture | 25.5 | 25.3 | 37.6 |
| Distributive Education | 34.7 | 42.3 | 51.9 |
| Health | 17.8 | 78.2 | 76.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 68.6 | 75.8 | 82.1 |
| Technical | 27.3 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 87.9 | 88.6 | 76.9 |
| Traditional: Total Gainful & Non-gainful | 87.7 | 88.3 | 80.9 |
| Gainful Only | 76.9 | 88.8 | 87.5 |
| Trades and Industry | 5.1 | 100.0 | 100.0 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 92.2 | 91.4 | 93.7 |
| Home Economics (Gainful) | 62.8 | 72.2 | 71.5 |
| Business | 90.2 | 90.4 | 96.1 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 92.5 | 88.0 | 79.5 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Non-Traditional

Agricultural. Small enrollments, but major percentage increase:

| % Women | 1972 | 1978 |
|---|---|---|
| N.H. | 5.5% | 18.2% |
| U.S. | 3.9 | 13.1 |

Technical. Small programs with little growth.

Trade & Industrial. Large expansion in numbers; small rise in percent.

Detailed programs. Women made major gains in Drafting and Graphic Arts.

## Mixed and Traditional

Business. Drop in total number of students enrolled.

Mixed. Increase in numbers of women and large increase in percent.

Detailed programs

| | % Women | 1972 | 1978 |
|---|---|---|---|
| Accounting & Computing | N.H. | 68.6% | 82.1% |
| | U.S. | 56.8 | 60.5 |

Traditional. Large drop in total numbers of students in Traditional Business courses from 5,753 in 1972 to 1,208 in 1978; a drop occurred in each program.

Distributive Education. Numbers of women increased from 1972 to 1978 (418 to 1,068) for Mixed courses; percent women increased sharply, nearing the national average by 1978:

| % Women | 1972 | 1978 |
|---|---|---|
| N.H. | 34.7% | 51.9% |
| U.S. | 46.3 | 52.2 |

## Health

Mixed. Women made small gains in numbers but a large gain in percent because of the addition to the "Miscellaneous Health" program in 1976 of course(s) enrolling mainly women.

Traditional. Percent was unchanged; but numbers of women dropped.

Home Economics. Numbers and percents were low in both Gainful and Non-gainful compared to national data. Percent women in Traditional Gainful Home Economics increased from 1972 to 1978 from 62.8% to 71.5%; different from the national percentage which declined.

NEW MEXICO

## Summary Analysis

### State Reports

The MERC/Q report addressed the content and quality of the vocational program, with no apparent response from the state.

The state's response to the BOAE staff report indicated a very weak commitment to taking an active role in the elimination of sex bias.

The carryover funds from the mandated $50,000 were not expended. (The Commission on the Status of Women stated at the Denver Hearing in May, 1980 that they had requested the unexpended balances. For a minimum of three years New Mexico spent less than the $50,000 minimum required.)

### Enrollment Data

Non-traditional enrollment of women was similar to U.S. data except in Trade and Industrial which was well below U.S. average. Women did increase in some Non-traditional courses which had a strong male role image.

The percent of women in Mixed programs increased by 1978, but for the Business occupations this did not represent a major change between 1972 and 1978.

Men made no gains in programs Traditional for women except in Traditional Trade and Industrial.

## Analysis of New Mexico State Reports

### SACVE Recommendations

Although non-traditional training areas have begun to attract students of both sexes, some resistance remains to opening up training opportunities to both sexes in non-traditional areas.

Schools which exhibit arbitrary barriers to students entering vocational programs of their choice should receive follow-up visits.

Follow-ups should involve students, parents, and other community members in developing an equal opportunity blueprint.

State staff should serve as resource personnel to assure that vocational education eventually is made available to students regardless of sex.

Given the strong feeling of local autonomy in many of the rural communities in New Mexico, little can be accomplished unless the community and the school are involved in a well planned educational process which will demonstrate why it is important to make vocational programs accessible to all students.

### Public Hearing Comments

No comments related to sex equity were identified.

### BOAE Staff Report

The Plan does not report on the success of its provisions to ensure equal access to programs by men and women.

### MERC/Q Findings

Many Local Advisory Councils do not have adequate representation of women.

No evidence that programs have been developed to eliminate sex bias or to provide incentives to school districts.

No displaced homemaker funds expended; no center established.

Only $38,874 budgeted for Sex Equity Coordinator; the difference should be carried over to 1979.

Placement of students who have completed vocational education has not been addressed.

Many LEA announcements, bulletins and applications do not have a non-discrimination statement.

No effort to eliminate sexist terminology and sex stereotyping examples and illustrations in curricular material is evident.

## Program Descriptions

Displaced homemakers. Develop a center for displaced homemakers, teenage parents, female heads of household; special services for elderly women and other special groups, including guidance and counseling, job development and placement services, and health and legal services. One center to be established and operational by the end of Fiscal Year 1980.

## Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Displaced Homemakers | $ 61,240 | -0- |
| Sex Bias Personnel | 50,000 | $ 21,127 |
| Day Care/Supportive Services | -0- | -0- |
| Sex Bias Grants | 22,847 | 22,847 |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, New Mexico

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 2.7 | 12.7 | 10.8 |
| Trades and Industry | 3.1 | 6.8 | 5.6 |
| Agriculture | 1.2 | 19.3 | 21.2 |
| Distributive Education | 8.1 | 20.9 | 14.9 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 4.5 | 18.1 | 15.5 |
| Mixed: Total Gainful & Non-gainful | 62.5 | 58.4 | 62.8 |
| Gainful Only | 57.1 | 54.5 | 62.8 |
| Trades and Industry | 61.5 | 33.8 | 30.1 |
| Agriculture | 77.8 | 46.5 | 48.0 |
| Distributive Education | 61.3 | 58.3 | 62.6 |
| Health | 95.8 | 73.6 | 86.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 39.5 | 53.8 | 75.1 |
| Technical | 0.0 | 0.0 | 59.7 |
| Home Economics (Non-gainful) | 71.0 | 74.2 | 0.0 |
| Traditional: Total Gainful & Non-gainful | 85.2 | 86.8 | 84.7 |
| Gainful Only | 85.0 | 89.4 | 89.7 |
| Trades and Industry | 97.5 | 96.1 | 92.2 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 87.7 | 89.4 | 87.3 |
| Home Economics (Gainful) | 85.8 | 73.9 | 78.9 |
| Business | 82.9 | 93.8 | 93.7 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 85.4 | 85.3 | 81.5 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of New Mexico Detailed Enrollment Data, 1972-1978

### Non-Traditional

Agricultural. The percent women enrolled in Agricultural courses increased more from 1972 to 1978 than the U.S. average. Number of women enrolled increased from 45 in 1972 to 1,050 in 1978:

| % Women | 1972 | 1978 |
|---|---|---|
| NM | 1.2% | 21.2% |
| U.S. | 3.9 | 13.1 |

Detailed programs. Over 90% of the women in Non-traditional Agricultural were in Agricultural Production in 1978, whereas nationally only 72% of women in Non-traditional Agricultural were in Agricultural Production.

Technical. The percent women enrolled in Technical courses increased similarly to the U.S. Number of women in Non-traditional Technical courses was very small with only 200 by 1978.

| % Women | 1972 | 1978 |
|---|---|---|
| N.M. | 4.5% | 15.1% |
| U.S. | 8.6 | 16.7 |

Trade and Industrial. The percent women enrolled in Trade and Industrial courses in New Mexico in 1978 was 5.6%, an increase from only 3.1% in 1972. In both cases percent enrollment in New Mexico was less than the national.

Detailed programs. In 1972 women were enrolled in only 5 Trade and Industrial courses; by 1978 women were enrolled in 27 courses.

Although women increased in Drafting and Graphic Arts, as they did elsewhere in the U.S., in New Mexico women also increased in Other Metal Working (25.3%), Woodworking (26.0%), and Electrical (11.3%).

### Mixed

The percent of women enrolled in Mixed courses in New Mexico (62.8%) in 1978 was higher than for the U.S. (55.7%). This was particularly true for Distributive Education (62.6% vs. 52.5%), Health (86.0% vs. 57.7%), and Business (75.1% vs. 60.5%).

Distributive Education. Enrollment of women in Distributive courses doubled between 1972 and 1978 from 1,000 to 2,150.

Detailed programs. Women were concentrated in General Merchandise, Apparel and Accessories, Food Services, and Miscellaneous.

Traditional

The percent of women in Traditional courses decreased between 1972 and 1978. This was related particularly to a decrease in Traditional Trade and Industrial courses.

Trade and Industrial. Number of women in Traditional Trade and Industrial dropped from 2,100 in 1972 to 150 in 1976 to 47 in 1978 because of a drop of enrollment in Cosmetology.

Business. Percent women decreased in Typing. Total enrollment of students between 1972 and 1976 dropped from 9,700 to 500; the number of women dropped from 7,500 to 450.

Health. Enrollment of women in Traditional Health courses remained constant between 1972 and 1976 but increased between 1976 and 1978. Most of the increase occurred in Practical Nursing and Nurses' Aide courses.

NEW YORK

## Summary Analysis

### State Reports

In addition to the complex set of equity activities in New York, the SACVE provided more recommendations than most other SACVEs and the state responded to most of them. Even in New York, however, the state felt that funds for day care must come from the local level because of limited funds available at the state level.

A balanced variety of programs was funded at the $730,000 level by the state.

The State Plan required goals and action plans at the LEA level. The state established criteria and guidelines to assist local school personnel in improving sex equity. They required evaluation by Local Advisory Councils and established criteria for such evaluations. They promoted the hiring of professional women in administrative and supervisory positions, and of men and women for non-traditional teaching positions; and pre-service training of vocational education teachers on elimination of sex bias.

Unlike most states, New York addressed the problem of training for teenage parents.

### Enrollment Data

New York had a major increase in percent women enrolled in Non-traditional courses by 1976; but there was a drop in enrollment in Trade and Industrial between 1976 and 1978 due almost entirely to the drop in the "Trade and Industrial, Other" classification. Without "Trade and Industrial, Other," the New York average was proportionately better than the U.S. All other Non-traditional courses had increases by 1978, but the major gains in New York, as in other states, were in those without a strong male role image (Drafting, Graphic Arts, Law Enforcement, etc.).

Women made major gains in Mixed training areas, particularly in Business and Health. Men made relatively small gains in courses Traditional for women except for their increase in Home Economics, Gainful and Non-gainful.

New York's enrollment data was not as positive as might have been expected based on their efforts to bring about institutional change at the state and LEA levels. The enrollment data should be watched to determine if additional gains are made in the next few years.

This is not to suggest that New York did not make progress; it did. Starting with a low level of men and women in courses Non-traditional for their sex, the state increased enrollment of women in Non-traditional and Mixed courses. The two major areas that showed relatively little change were enrollment of men in courses Traditional for women (except in Home Economics), and women in Non-traditional Trade and Industrial courses with a strong male role image.

## Analysis of New York State Reports

### SACVE Recommendations

The Council recommends that staff of the Women's Unit should meet with the staff of Career Education to assure that equity issues are included in planning for career education.

> State response. Staff of the Women's Unit has met with staff of Career Education and has made recommendations.

The Council is concerned that no funds have been made available for child care.

> State response. The state is encouraging LEAs and community colleges to make provisions for child care locally.

The Council recommends that a survey should be made of local administrators to determine what problems they are having locally in eliminating sex bias.

> State response. This information has been gathered through the local action planning process. Grants have been made based on the problems identified.

The Council recommends that more data be gathered and disseminated on enrollment of students and employment of teachers and administrators in non-traditional courses.

> State response. All data required by the VEA regulations are being collected and analyzed.

The Council recommends that steps to be taken to bring all units into compliance should be issued.

> State response. All occupationally related instruction units are required to develop a plan of action to eliminate sex bias.
>
> Council response. This is a good start, but other units, such as Vocational Guidance and Counseling and Career Education should also be scrutinized. Someone should be assigned to carry out this function.

The Council recommends that the funds that are assigned are inadequate to carry out the functions of the Sex Equity Coordinator.

> State response. Additional funds have been made available.

### Public Hearing Comments

No comments related to sex equity were identified.

MERC/Q Findings

No MERC/Q was conducted for New York.

State Plan

The following procedures established by the state emphasized a required planning procedure by the LEA which establishes both goals and an action plan before a LEA can obtain funding from the state:

- Establish goals and action plans as part of the planning process in all educational institutions in the state that promote equal opportunities for all students at all educational levels.
- Develop criteria, guidelines, and checklist, to assist in identifying sex bias and sex stereotyping in programs and funded projects to help local school personnel make improvements.
- Require local advisory council to develop criteria for evaluating programs and procedures that encourage the elimination of sex bias, sex stereotyping, and sex discrimination.
- Promote the certification and hiring of professional women in occupational education for adminstrative and supervisory positions at the state and local levels.
- Recruit women and men for non-traditional teaching positions to provide a positive role model for students.
- Assist 2 and 4 year teacher education college staff to analyze and improve the contents and approaches used in recruiting women in non-traditional programs.
- Support efforts in pre-service education to eliminate sex bias attitudes in the preparation of occupational teachers, thereby changing attitudes before they reach the classroom.
- Analyze existing and/or prepare new curriculum resources and recruiting materials that eliminate sex bias and stereotyping and show the accomplishments and contributions of women in various roles.
- Insure that funds are allocated for program activities, services, facilities, and equipment equally for females and males.
- Provide occupational training programs, counseling, special services, and job placement for teenage parents, women returning to the labor market as a result of economic need or changed marital status, women seeking jobs in non-traditional areas, single heads of households, and homemakers who work part-time and desire full-time employment.

Program Descriptions

A total of $729,678 was allocated to "Grants to Assist in Overcoming Sex Bias." Twenty-six projects received funding:

Recruit qualified area women for the Engineering and Industrial Technologies Program by developing new career awareness literature and by providing counseling, in-service seminars and tutorial and job placement services.

Provide training opportunities in non-traditional areas for women of all ages by developing and implementing special recruitment and counseling strategies.

Create awareness of non-traditional career opportunities and increased participation in such occupations through group and individual counseling, a lecture series on non-traditional career opportunities for women, and seminars on job search and employment skills.

Reduce sex bias and stereotyping in occupational education through the involvement of business and industry in work experience programs and job placement, and through curriculum revision and development.

Raise the awareness level of administrators, parents, guidance counselors, and students through pre-service and in-service activities, review of current guidance and recruitment materials, and the development of a new promotional brochure on elimination of sex bias and stereotyping in occupational education.

Conduct in three locations an in-service workshop on overcoming sex bias and stereotyping in vocational education.

Conduct statewide training of in-service teams for reducing sex stereotyping with the goal of eliminating sex stereotyped attitudes, behaviors, and expectations of secondary school personnel and adolescents, and expanding occupational and total life expectations of adolescents.

Involve teachers, guidance counselors, and administrators in a graduate credit course for teachers on sex-fair curriculum development for occupational education.

Develop and implement programs on technology for women high school students through the joint effort of guidance counselors, faculty, and local industry representatives, in order to bring about attitudinal and behavioral changes that will make technical career training a feasible choice for the students.

Develop recruitment materials to attract females to courses in engineering technologies.

Conduct activities designed to reduce sex bias and stereotyping in an attitudinal change and skill development program, in conjunction with business and industry, in order to increase the employability of women in the area.

Develop a Fishbein-type evaluation model that will predict the presence of sex-fair teaching behaviors in the classroom.

Assess current achievements of the New York City Board of Education in meeting sex equity objectives; and develop capacity for meeting these objectives in secondary and postsecondary institutions offering occupational programs, in central office occupational administration, and in vocational advisory councils.

Provide a summer secondary program in auto and electronics trades to encourage movement of women students into trades traditional for men.

Conduct a needs assessment identifying education-related needs of women who are highly motivated to return to school for engineering and computer science degrees.

Provide workshop training for 350 people statewide in GAMES (Games to Achieve the Mandate for Equality in Schools), an occupational education project for secondary school counselors and administrators involved with students making career decisions.

Eliminate sex bias in vocational youth organizations.

Conduct in-service workshops for occupational education staff designed to eliminate sex bias and stereotyping.

Expand career options for all students to reduce sex bias in the schools, K-12, by developing in couselors, teachers, and administrators the necessary awareness, knowledge, and skills.

Assist in the certification and promotion of four women candidates in educational administration through paid supervised internships and assistance in job seeking activities.

Conduct in-service courses for junior and senior high school occupational education staff in a learing center; evaluate text books and materials; meet with counselors and other staff to develop student recruitment approaches for expanded vocational roles; enroll some students in non-traditional courses; and survey learning center students and teachers to determine perceptions of teacher attitudes and sex biases.

Conduct a sex equity conference for guidance counselors and occupation education teachers, a staff training course for project participants, and group guidance sessions with 10th grade students; develop and disseminate a bias-free guidance module for use by counselors.

Centralize and update a statewide pool of qualified leaders to enhance the potential for women administrators to enter educational supervisory and management positions; develop in cooperation with the Commissioner's Statewide Advisory Council on Equal Opportunity for Women, District Superintendents, and the State Education Department's Occupational Education Special Programs.

Develop a manual for teachers and administrators for use in working with students in non-traditional job training; a manual for guidance counselors to help them help students participating in non-traditional job training; and a slide presentation and narrative in each major occupational area in which sex stereotyping prevails.

Conduct a multi-faceted career awareness program to recruit and train women for non-traditional occupations, including liaison with local employers for on-site job experiences and visitations to role models.

Displaced homemakers. Vocational Instruction and Education for Women (VIEW), a program of career counseling, job skills development, and supportive services targeted at area women who are heads of households, primary wage earners, divorced, or an ethnic minority, and are seeking career retraining.

Budget Data

| Purpose | FY 1978 Allocated | FY 1978 Expended |
|---|---|---|
| Sex Equity Personnel | $ 50,000 | 50,000 |
| Support Services to Women | -0- | -0- |
| Day Care | -0- | -0- |
| Displaced Homemakers: Post-secondary | 175,000 | 81,000 |
| Secondary | 100,000 | No data |
| Program Improvement and Support Services | 800,000 | 800,000 |
| Curriculum | 1,220,000 | No data |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, New York

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 6.0 | 11.8 | 10.1 |
| Trades and Industry | 5.1 | 12.3 | 7.8 |
| Agriculture | 6.8 | 16.9 | 22.7 |
| Distributive Education | 58.9 | 50.0 | 11.8 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 7.5 | 7.5 | 13.5 |
| Mixed: Total Gainful & Non-gainful | 58.8 | 52.8 | 59.2 |
| Gainful Only | 51.8 | 51.2 | 58.4 |
| Trades and Industry | 31.9 | 32.1 | 62.0 |
| Agriculture | 23.6 | 53.5 | 57.5 |
| Distributive Education | 44.9 | 47.7 | 54.2 |
| Health | 63.6 | 59.7 | 74.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 56.1 | 54.4 | 57.9 |
| Technical | 5.5 | 28.1 | 27.9 |
| Home Economics (Non-gainful) | 98.1 | 84.4 | 85.0 |
| Traditional: Total Gainful & Non-gainful | 94.3 | 84.4 | 83.8 |
| Gainful Only | 87.9 | 88.7 | 88.1 |
| Trades and Industry | 93.3 | 88.0 | 91.3 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 91.8 | 88.4 | 88.5 |
| Home Economics (Gainful) | 83.3 | 85.1 | 76.5 |
| Business | 86.8 | 89.1 | 88.7 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 98.1 | 81.5 | 80.5 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of New York Detailed Enrollment Data, 1972-1978

### Non-Traditional

Agricultural. The percent women enrolled in Non-traditional Agricultural courses in New York (22.7%) was much higher than that of the U.S. in 1978 (13.1%).

Enrollment of men expanded little between 1972 and 1978 (16,500 to 17,300) while enrollment of women almost quadrupled (1100 to 3900).

Expansion occured in all programs.

Technical. The percent of women enrolled in Non-traditional Technical courses increased between 1972 (7.5%) and 1978 (13.5%).

The number of women enrolled more than doubled between 1972 and 1978 (2350 to 5800).

Detailed programs. Areas of major expansion included:

| | 1972 | 1978 |
|---|---|---|
| Architectural Technology | 6.9% | 13.3% |
| Industrial Technology | 4.6 | 15.7 |
| Mechanical Technolgoy | 6.6 | 14.2 |
| Chemical Technology | 16.8 | 30.2 |

Trade and Industrial (T&I). In New York the percent women in Non-traditional Trade and Industrial increased from 5.1% to 7.8% in 1978 while the increase for the U.S. was 5.4% to 9.5%. In 1976 however, New York had 12.3 % women in Trade and Industrial while the U.S. had only 7.8%.

The number of women enrolled in Non-traditional Trade and Industrial was 3,700 in 1972, rose to 17,800 in 1976 and then decreased to 12,900 by 1978. The major cause of this decrease was a 6,000 drop from 1976 to 1978 in those enrolled in "T&I, Other" courses. Without "T&I, Other," Non-traditional Trade and Industrial in New York was 11.9% - higher than the U.S. without "T&I, Other," 8.2%:

| Non-traditional T&I | 1972 | 1976 | 1978 |
|---|---|---|---|
| N.Y. | 5.1% | 12.3% | 7.8% |
| U.S. | 5.4 | 7.8 | 9.5 |
| "T&I, Other" | | | |
| N.Y. | 24.8% | 68.6% | 20.7% |
| U.S. | 18.7 | 26.1 | 24.7 |
| Non-traditional T&I without "T&I, Other" | | | |
| N.Y. | 3.0% | 6.3% | 11.9% |
| U.S. | 4.3 | 6.5 | 8.2 |

Detailed programs. The major areas of expansion were:

| | 1972 | 1978 |
|---|---|---|
| Drafting | 4.7% | 12.1% |
| Graphic Arts | 11.1 | 23.7 |
| Law Enforcement | 6.4 | 30.3 |

Mixed

The percent of women increased; enrollment of women in Mixed courses doubled between 1972 and 1978.

Business. Greatest expansion of enrollment was in Supervisory and Administrative Management, and Accounting and Computing.

Health. Percent women enrolled in Mixed Health (75%) was higher than U.S. (58%) in 1978.

Trade and Industrial. The percent women in Mixed Trade and Industrial in New York (62%) was much higher than for the U.S. (47%) in 1978.

Traditional

Home Economics. The only gain for men was in both Gainful and Non-gainful Home Economics.

# OHIO

## Summary Analysis

### State Reports

Ohio's reporting system was different from other states', consisting mainly of computer printouts. Projections based on reports of the LEAs and community colleges are developed by computer. The result is a reporting system rather than a planning system. Therefore responses could not be compared to other states' planning procedures, nor was there any way to analyze the activities without additional knowledge of the system or descriptions of the programs. Appendix G of the Plan, The Report of the Sex Fair Coordinator, provided most of the information used in this study to describe the Ohio planning process.

### Enrollment Data

In 1972 Ohio enrollment of women was close to the U.S. Since then, except in Agricultural, Ohio has fallen slightly behind the U.S.

In Trade and Industrial, the number of women increased in a variety of occupational training areas, but the percent women increased mainly in the courses without a strong sex role image such as Drafting and Graphic Arts.

There was a major increase of women in Mixed programs, except Health. Men increased only slightly in Home Economics.

## Analysis of Ohio State Reports

### SACVE Recommendations

State Board should take steps to attract women and minorities to vocational education and to eliminate all discrimination.

> State response. Efforts are going on in terms of workshops, materials, evaluation, planning, and reporting. Workshops and materials will be developed in FY 1979.

Vocational education and CETA should seek occupational preparation solutions to unemployment.

> State response. There are daily ongoing linkage between vocational education and CETA.

### Public Hearing Comments

No comments related to sex equity were identified.

### BOAE Staff Report

Five year plan should be revised to describe Ohio's program for displaced homemakers and other special programs.

### MERC/Q Findings

No MERC/Q was conducted for Ohio.

### State Plan

Each Vocational Education Planning District had a sex equity plan of action as a section of its application; it included 9 goals:

> Enrollment patterns in all vocational education programs which have 80 percent or more enrollment of one sex will be examined for indicators of sex bias, sex discrimination, and sex stereotyping.
>
> The hiring and firing of vocational personnel will be implemented according to state and Federal laws with regard to sex.
>
> Recruitment and descriptive information about vocational education programs will have statements that the program is available to all persons regardless of sex.
>
> Effective action will be taken toward recruiting both males and females into programs dominated by member of one sex.

Positive action will be taken by counselors in the state to eliminate sex bias and sex stereotyping in student selection of vocational education courses or career decision-making.

Administration, guidance, and instructional personnel will receive training in procedures and strategies in overcoming sex stereotyping and sex bias.

Cooperative and work experience programs will make agreements only with those employers who do not discriminate against employees on the basis of race, sex, or other discriminatory criteria.

Currriculum materials used in vocational education programs will be reviewed and revised for the purpose of elminiation of sex bias, sex stereotyping, and sex discrimination elements.

Job information about the programs will emphasize career opportunities for males and females.

## Program Descriptions

Incentive grants were made for planning, materials development, and graduate study.

Plan expressed a need for research on effectiveness of vocational education in serving needs of urban women, minority women, bilingual women, handicapped women, Appalachian rural women, and disadvantaged women.

## Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Displaced Homemakers | $103,000 | $ 1,000 |
| Support for Women | 1,000 | 1,000 |
| Sex Bias Eradication | 2,000 | 2,000 |
| Sex Equity Staff | 50,000 | No data |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Ohio

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 5.5 | 8.1 | 9.4 |
| Trades and Industry | 5.6 | 7.1 | 8.1 |
| Agriculture | 5.1 | 11.1 | 14.0 |
| Distributive Education | 6.3 | 10.3 | 11.5 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 5.5 | 8.2 | 11.5 |
| Mixed: Total Gainful & Non-gainful | 55.1 | 47.2 | 55.3 |
| Gainful Only | 49.6 | 45.6 | 53.7 |
| Trades and Industry | 52.7 | 48.0 | 50.7 |
| Agriculture | 43.2 | 56.2 | 62.5 |
| Distributive Education | 51.0 | 48.6 | 50.4 |
| Health | 79.9 | 24.6 | 39.8 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 46.3 | 50.9 | 73.9 |
| Technical | 21.2 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 65.2 | 65.3 | 67.5 |
| Traditional: Total Gainful & Non-gainful | 94.1 | 88.3 | 86.7 |
| Gainful Only | 94.5 | 93.6 | 94.2 |
| Trades and Industry | 98.3 | 97.7 | 98.1 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 97.0 | 95.8 | 95.2 |
| Home Economics (Gainful) | 86.0 | 85.1 | 85.1 |
| Business | 95.5 | 95.8 | 97.1 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 93.9 | 85.6 | 82.6 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of Ohio Detailed Enrollment Data, 1972-1978

### Non-Traditional

Agricultural. Increase in percent women was similar to the national increase, with Ohio consistently at least one percentage point above the U.S. average.

| % Women | 1972 | 1976 | 1978 |
|---|---|---|---|
| Ohio | 5.1% | 11.1% | 14.0% |
| U.S. | 3.9 | 9.6 | 13.1 |

Number of women increased from 1,597 in 1972 to 5,029 in 1978.

Detailed programs. Most of the increase occurred in Agricultural Production with 4,300 women (14.8%) by 1978.

Technical. Numbers of total students were small and dropped from 1972 to 1978. The numbers of women increased by 1978 but still were small, particularly in the light of the large number of total students enrolled in vocational education in Ohio.

Trade and Industrial. Increase in percent women enrolled in Ohio was less than the increase in the U.S.:

| % Women | 1972 | 1978 |
|---|---|---|
| Ohio | 5.6% | 8.1% |
| U.S. | 5.4 | 9.5 |

Number of women increased from 5,100 in 1972 to 11,215 in 1978.

Detailed programs. Major increases in percent women occurred in Other Construction (14.4%), Custodial Services (47.5%), Drafting (17.4%), Graphic Arts (29.3%), Law Enforcement (10.9%), and Trade and Industrial Other (27.1%). Machine Shop (4.1%), Electrical Occupations (4.1%), and Firefighter Training (1.4%) increased in numbers, but percents remained low.

### Mixed and Traditional

The number of women in Mixed courses increased greatly from 1972 (34,200) to 1976 (59,500) and then dropped slightly by 1978 (55,000). This decrease occurred mainly in Distributive and Business Education.

The percent women enrolled in Traditional courses in Ohio by 1978 (94.2%) was considerably greater than in the U.S. (85.7%).

Women's enrollment in Traditional courses was similar to the pattern in Mixed courses. Enrollment nearly doubled between 1972 and 1976 but decreased slightly between 1976 and 1978.

## Mixed

Business. In 1978 the percent of women enrolled in Mixed Business in Ohio (73.9%) was greater than in the U.S. (60.5%).

Detailed programs. In 1972, the U.S. percents of women in the two largest Mixed Business programs were higher than the Ohio percents, but by 1978 Ohio's were much higher than the U.S. averages.

| | % Women | 1972 | 1978 |
|---|---|---|---|
| Accounting & Computing | Ohio | 49.3% | 78.2% |
| | U.S. | 59.8 | 66.1 |
| Business Data Processing | Ohio | 41.2% | 73.3% |
| | U.S. | 49.0 | 62.4 |

Distributive Education. The percent of women enrolled in Mixed Distributive Education courses remained the same in 1972 and 1978. However, the total number of students peaked in 1972 and dropped by 1978.

Health. In 1978 the percent women enrolled in Ohio (39.8%) was considerably less than the U.S. (57.7%).

Number of women in Mixed Health courses increased greatly between 1972 and 1976 and again slightly between 1976 and 1978.

Trade and Industrial. Number of women in Trade and Industrial Mixed courses continued to increase from 1972 to 1978.

Home Economics. In both Gainful and Non-gainful Home Economics courses the percent women decreased between 1972 and 1978. The numbers of both men and women increased only slightly.

# OKLAHOMA

## Summary Analysis

### State Reports

The State Plan was practical and persuasive. A planning and priority system was established based on careful data analysis of relevant performance factors. On the basis of the Plan, the enrollment data could have been expected to reflect more gains for women than they did.

Funds were expended on the Sex Equity Coordinator; some were to be expended on programs as well. A displaced homemaker program was supported by a state law, and expected to be operational in 1980.

### Enrollment Data

Women's gains in Non-traditional courses were greatest in Trade and Industrial courses in which they did not make appreciable gains nationally. Although there were gains in Agricultural, the state's average was very low in 1972 and still well below the national average in 1978. There were no gains in Technical courses although Oklahoma was slightly above the national average in 1972.

Women were above the national average in Mixed programs. There were no gains for men in programs Traditional for women.

## Analysis of Oklahoma State Reports

### SACVE Recommendations

Recommended support services to encourage more women to participate in non-traditional programs.

> State response. A number of support services for women, day care services, and special services for homemakers are currently available in the regular programs of instruction. Programming in these categories was limited due to limited resources.

### Public Hearing Comments

No comments related to sex equity were identified.

### BOAE Staff Report

No sex equity issues were identified.

### MERC/Q Findings

No MERC/Q was conducted for Oklahoma.

### State Plan

Established a system for analyzing male/female enrollment, and established priorities and programs based on that analysis. Enrollment was to be aggregated by sex, by type of institution, by level, by program area, and by economic region. This data was to be analyzed to determine if statistically significant changes in enrollment patterns by sex had occurred; whether change was greater in rural or urban area, in AVTS or comprehensive high schools, for adults or secondary students, for men or women; and in which programmatic areas change occurred.

The Plan reported that a review of the initial 1977-1978 enrollment indicated minor changes in male/female enrollment. There appeared to be a higher increase in non-traditional enrollments in comprehensive high schools than in area schools, and a slightly higher increase in non-traditional enrollments in urban areas.

The Plan noted that answers to these questions would provide direction for personnel charged with assisting the State Board in eliminating sex bias and sex role stereotyping in vocational programs.

## Program Descriptions

Although no sex bias studies were funded, proposals for research in identifying sex barriers were prepared and presented to the State Advisory Council.

Several schools established local model programs and were sharing their experience with other schools through state department staff. No supplemental monies were expended.

Displaced homemakers. A displaced homemaker bill was passed and signed by the Governor on March 29, 1978. The state department issued a request for a pilot multipurpose service center for displaced homemakers, to be funded in FY '80.

## Budget Data

| Purpose | FY '78 Allocated* | FY'78 Expended |
|---|---|---|
| Full-time Personnel | $ 50,000 | $ 52,031 |
| Displaced Homemakers | 5,000 | -0- |
| LEA Model Projects | 20,000 | -0- |
| Incentives to LEAs | 10,000 | 1,900 |
| Guidance and Counseling | 33,153 | -0- |
| Parenthood Education | 5,000 | -0- |

* Annual projects from the five year plan.

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Oklahoma

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 5.0 | 5.4 | 9.0 |
| Trades and Industry | 7.2 | 5.8 | 9.8 |
| Agriculture | 1.2 | 3.9 | 7.4 |
| Distributive Education | 15.9 | 6.6 | 11.0 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 9.8 | 9.1 | 10.0 |
| Mixed: Total Gainful & Non-gainful | 55.2 | 50.5 | 58.2 |
| Gainful Only | 54.9 | 51.9 | 61.5 |
| Trades and Industry | 44.3 | 51.0 | 57.2 |
| Agriculture | 17.7 | 39.7 | 32.9 |
| Distributive Education | 56.3 | 52.6 | 60.0 |
| Health | 88.5 | 62.0 | 65.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 46.8 | 51.3 | 70.3 |
| Technical | 11.9 | 33.0 | 34.8 |
| Home Economics (Non-gainful) | 74.3 | 42.8 | 46.0 |
| Traditional: Total Gainful & Non-gainful | 94.4 | 94.6 | 93.8 |
| Gainful Only | 92.3 | 91.7 | 93.4 |
| Trades and Industry | 91.5 | 94.3 | 95.7 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 91.3 | 89.6 | 92.7 |
| Home Economics (Gainful) | 90.7 | 90.6 | 89.4 |
| Business | 93.6 | 93.3 | 95.9 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 95.3 | 96.7 | 94.1 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Non-Traditional

Agricultural. Increase in percent of women enrolled was less than the national increase and the percent of women enrolled was substantially lower than the national percent in all three years, 1972, 1976, and 1978.

Enrollment of women went from 280 in 1972, to 1,167 in 1976, to 2,600 in 1978.

Detailed programs. Increases of women occurred in every program except Forestry with the bulk of the increase in Agricultural Production.

Technical. Percent of women in Non-traditional Technical courses was virtually the same in 1972 (9.8%) and 1978 (10.0%) while nationally the percent of women in Non-traditional Technical courses rose continually (8.6% to 16.7%).

The actual number of women enrolled was small; it increased from 480 in 1972 to 681 in 1976 and then decreased to 263 in 1978. At the same time, enrollment of men increased from 4200 in 1972 to 7,500 in 1976 and then also dropped to 2,500 in 1978.

Detailed programs. By 1978 three out of four women in Non-traditional Techical courses were in Police Science.

Trade & Industrial. Although the national percent of women increased continually (5.4% to 9.5%), in Oklahoma the percent of women decreased between 1972 (7.2%) and 1976 (5.8%). The percent of women then increased 4 points between 1976 (5.8%) and 1978 (9.8%) even though male enrollment increased an additional 25,000. Enrollment of women went from 2,000 in 1972 to 6,100 in 1978.

Detailed programs. Half of the increase which occurred between 1976 and 1978 was in Electrical Occupations where enrollment of women increased by 2,400. Enrollment of women increased by 100 or more in 10 other courses.

## Mixed

The percent women enrolled in Mixed courses increased from 54.9% in 1972 to 61.5% in 1978. This pattern was similar to the national increase from 40.6% to 46.7%, but the representation of women was much higher in Oklahoma. Enrollment of women in Mixed courses increased steadily from 1972 to 1978 (7,300 to 15,600).

Business. Increase of women in Mixed Business occurred almost exclusively in Accounting and Computing.

Health. Enrollment of women decreased from 1,300 in 1972 to 600 in 1978. Enrollment of men in Mixed Health also decreased.

Traditional

Total number of students in Non-gainful Home Economics tripled between 1972 and 1978. The increase occurred in Institutional and Home Management, Care and Guidance of Children, and Food Management, Production and Services. Enrollment of women in Non-gainful Home Economics decreased only slightly from 30,500 in 1972 to 26,000 in 1978; the major decrease in enrollment occurred prior to 1976. The percent women enrolled remained the same.

# OREGON

## Summary Analysis

### State Reports

Although the MERC/Q raised several issues of non-compliance, Oregon was apparently committed to sex equity. Still missing were specific provisions requiring programs at the local level.

If the knowledge gained from the SACVE study is applied, it should prove useful to Oregon and to other states as well.

### Enrollment Data

The state had a relatively high percent of women enrolled in 1972. It was still above the national average in 1978, but the only major increase between 1972 and 1978 was in Agricultural.

There was a decrease of women in all Mixed programs and a particularly large decrease of women in Mixed Business courses.

Men made major gains in programs Traditional for women; this was particularly true for Non-gainful Home Economics. The large increase in numbers of men in all courses affected the percents of women enrolled in Oregon.

SACVE Recommendations

There are no role models in the schools to assist in reducing sex bias. State should encourage training and placement of qualified men and women vocational instructors in non-traditional areas.

SACVE undertook a study at the public hearing to determine whether the Annual and the Five Year State Plans were achieving their intended purposes. The study found that of the vocational teachers and administrators interviewed, 37% were not familiar with the State Plan, 29% had only a vague understanding of its contents, and 34% who were familiar with the Plan mentioned a number of problems:

- Goals are too general;
- Not relevant to many curricula;
- Too much emphasis on disadvantaged, handicapped, and women; and too many restrictions;
- Too idealistic; and
- No enough copies distributed.

General administrators, Advisory Council members, employers, and Board members who were interviewed were even less familiar, as a group, with the Annual Plan than vocational teachers and administrators. Fifty-seven percent indicated they had not heard of the Plan and 18% were only vaguely familiar with it.

Most of the respondents perferred passive provision of equal opportunity to active recruitment of students into non-traditional occupations. They based this preference on: (1) community pressures and values, (2) student values, and (3) difficulty in offering a realistic schedule of courses for both sexes. The following improvements were suggested:

- Eliminate sex bias in textbook materials.
- Require teachers to develop goals related to non-traditional education in their work plans.
- Require attendance of vocational instructors at workshops which explain problems of sex equity.
- Make students, particulary eighth grade students, more aware of employment opportunities in non-traditional fields.
- Publicize the advantages of entering non-traditional careers, and reduce the stigma associated with this type of choice.

- Improve guidance and couseling, especially at junior high and elementary school levels.

- Provide opportunities for students to see members of their own sex working in non-traditional occupations.

Public Hearing Comments

(Sex equity received specific emphasis in public notices of the hearing). Concern was expressed regarding the insufficient preparation of vocational instructors in the area of sex equity and regarding the insufficient efforts being made to recruit women into non-traditional occupational areas.

BOAE Staff Report

No sex equity issues were identified.

MERC/Q Findings

Increased information on progress toward sex equity should be provided to National and State Advisory Councils on Vocational Education. State Advisory Council should evaluate vocational education programs to overcome sex bias. No evidence that state has addressed problems identified as a result of its Title IX self-evaluation. Insufficient evidence of state compliance.

Program Descriptions

A project on elimination of sex bias for ABE students was approved.

Projects projected in 1978 included elimination of sex bias in guidance and counseling at secondary and post-secondary levels.

Displaced homemakers. Post-secondary education agencies to provide training, employment, and placement services for displaced homemakers.

Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Day Care Services | -0- | -0- |
| Support Services | $ 18,000 | $ 47,458 |
| Sex Bias Personnel | 50,000 | 30,382 |
| Guidance and Counseling | 20,000 | No data |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Oregon

| | 1972 | 1976 | 1978 |
|---|---|---|---|
| | | (percent) | |
| Non-traditional: Total | 12.0 | 10.4 | 14.0 |
| Trades and Industry | 13.6 | 8.6 | 13.3 |
| Agriculture | 9.8 | 21.7 | 24.2 |
| Distributive Education | 1.6 | 9.0 | 0.0 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 3.7 | 8.5 | 8.4 |
| Mixed: Total Gainful & Non-gainful | 54.2 | 54.9 | 50.7 |
| Gainful Only | 54.2 | 54.9 | 50.7 |
| Trades and Industry | 42.4 | 58.5 | 65.6 |
| Agriculture | 29.2 | 36.6 | 43.7 |
| Distributive Education | 44.4 | 56.7 | 47.4 |
| Health | 15.6 | 48.9 | 55.1 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 63.0 | 55.8 | 53.2 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 0.0 | 0.0 | 73.9 |
| Traditional: Total Gainful & Non-gainful | 89.5 | 90.8 | 75.6 |
| Gainful Only | 86.8 | 83.7 | 80.9 |
| Trades and Industry | 78.9 | 82.1 | 53.1 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 98.4 | 92.2 | 86.5 |
| Home Economics (Gainful) | 75.2 | 78.8 | 76.3 |
| Business | 87.7 | 83.1 | 82.2 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 90.6 | 95.0 | 72.0 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of Oregon Detailed Enrollment Data, 1972-1978

### Non-Traditional

Agricultural. The national percent of women enrollees increased from 3.9% in 1972 to 13.1% in 1978, but in Oregon the percent women was 9.8% in 1972 and rose to 24.2% by 1978. Number of women enrolled went from 468 in 1972 to 1,523 in 1978.

Technical. Percent women enrolled in Non-traditional Technical courses in Oregon increased from 3.7% (1972) to 8.5% (1976) with no increase thereafter, while nationally, percent women increased from 8.6% (1972), to 12.2% (1976), and to 16.7% (1978).

Detailed programs. Major increase was in Electronic Technology.

Trade and Industrial. The percent of women enrollees was virtually unchanged from 13.6% (1972) to 13.3% (1978). The national percent increased from 5.3% (1972) to 9.5% (1978).

Number of women enrolled went from 3,707 (1972) to 4,944 (1978). Increases occurred in the same large courses as was true nationally.

### Mixed

Number of women enrolled in Mixed courses in Oregon expanded from 8,700 (1972) to 16,700 (1978).

Business. The reduction of percent women in Mixed Business was entirely the result of an increase in the total number of students from 9,000 (1972) to 15,400 (1978) while women increased from 5,700 (1972) to 8,200 (1978).

Percent women enrolled in Mixed Business courses in Oregon declined from 63.0% (1972) to 53.2% (1978) while nationally the percent women enrolled in Mixed Business courses increased from 56.8% (1972) to 60.5% (1978).

Detailed programs. Most of the women enrolled in Mixed Business in 1978 were in Accounting and Computing, and Supervisory and Administrative Management.

Distributive Education. Most of the women enrolled in Mixed Distributive Education in 1978 were in Finance and Credit, Real Estate, and Miscellaneous Distributive courses.

Health. Nationally the percent women enrolled in Mixed Health courses declined from 63.2% (1972) to 57.7% (1978). In 1972, in Oregon, the percent women enrolled in Mixed Health, 15.6%, was substantially below the national percent but by 1978, Oregon had increased to 55.1%, nearly equal to the national.

Trade and Industrial. Percent women enrolled in Mixed Trade and Industrial increased more rapidly and consistently from 1972 to 1976 and 1978 (42.4%, 58.5%, 65.6%) than was true of the national (40.6%, 38.0%, 46.7%). Total number of students fell in 1978 to 1972 level of 1,000 after it had increased to 3,500 in 1976.

Traditional

In Oregon the enrollment of women in Traditional courses increased from 18,300 (1972) to 28,400 (1978). Every detailed program showed a similar proportional increase. All decreases in the percent women in Traditional courses, with the exception of Traditional Trade and Industrial, were the result of an increase in enrollment of men rather than a decrease in enrollment of women.

Home Economics. There was a large reduction from 1972 to 1978 in both total number (45,900 to 37,000) and percent (90.6% to 72.0%) of women enrolled in Non-gainful Home Economics.

# PENNSYLVANIA

## Summary Analysis

### State Reports

Because there was little program description, it was difficult to be certain what programs were being operated, and how the state had responded to suggestions of the SACVE, public hearing, and MERC/Q. Further investigation is needed at the state level.

### Enrollment Data

Pennsylvania's patterns of Non-traditional enrollment were similar to those of the U.S., but in most cases Pennsylvania had not advanced as much.

Pennsylvania had a slightly lower percent of women in Non-traditional courses than the U.S. and showed few relative gains since 1976. Women in Pennsylvania made their greatest gains in the Mixed programs. There was a marked increase, greater than the U.S., in Mixed programs between 1972 and 1976, with an increase in all occupational training areas except Health.

Except for Non-gainful Home Economics, the percent of men enrolled in courses Traditional for women changed very little. This pattern was similar to the U.S. except that the percent of women in these courses was higher in Pennsylvania than in the nation.

The percents of women in Non-traditional programs and of men in programs Traditional for women were lower than those achieved nationally.

## Analysis of Pennsylvania State Reports

### SACVE Recommendations

The Council is concerned about the slow gains being made on enrollment of men and women in courses that are not traditional for their sex. They also question whether the resources assigned to sex equity by the state are adequate for so ambitious a program.

### Public Hearing Comments

The Pennsylvania Commission for Women questioned whether one Sex Equity Coordinator could undertake the gigantic task of initiating the activities specified for the 1979-80 sex equity plan. They also stated that the plan would be more meaningful if priorities were indicated, including the financial, human, and physical resources allocated to each activity.

> State response. The Sex Equity Coordinator will have the assistance of several State Department of Education (PDE) offices in carrying out the sex equity program. These include the Bureau of Vocational Education, the Research Coordinating Unit, Office of Higher Education as well as staff of the Bureau of Equal Educational Opportunity.

Incentives should be offered to encourage enrollment of both women and men in Non-traditional programs and development of model programs to reduce sex stereotyping.

> State response. The Federal law encourages the use of incentives but it is mute on accepted practices of specific incentives. Funds are available on a project basis in the areas of research, guidance, teacher education, exemplary, etc. Sex equity activities are an identified priority for these funds. Monetary awards to individuals are inappropriate. However, an effort is being made to develop additional incentives for inclusion in the annual plan.

### BOAE Staff Report

No sex equity issues were identified.

### MERC/Q Findings

Personnel did not assist State Board in publicizing public hearings. State moving into compliance.

No evidence that Title IX evaluations were reviewed.

No evidence that state has attempted to correct problems revealed by LEAs' Title IX self-evaluation process, or to make complaint process known.

Sex Equity Coordinator did not review distribution of grants and contracts at post-secondary and secondary level for sex bias, and did not review apprenticeship programs.

No evidence that Sex Equity Coordinator was monitoring hiring and promotion process to assure elimination of sex bias.

No evidence of priority given to exemplary and innovative programs that address sex equity. No evidence that proposals are reviewed to assure responsiveness to the issues.

No statement in brochures or announcements that the state and LEAs would not discriminate in enrollment or employment of teachers and administrators.

Program Descriptions

Development of pre-service and in-service teacher training programs to enable homemaking teachers to eliminate sex bias. Five workshops held.

Displaced homemakers. Federal funds totalling $100,000* have been budgeted for developing, promoting, and providing services for displaced homemakers. Thirteen programs to assess and meet the needs of displaced homemakers were reviewed and funded. No descriptions of the programs were included.

Budget Data

| Purpose | FY '78 Allocated | FY'78 Expended |
|---|---|---|
| Sex Bias Activity | $ 50,000 | $ 50,000 |
| Sex Equity | 10,142 | No data |
| Displaced Homemakers | 52,965* | 10,142 |
| Sex Bias & Discrimination | 65,000 | No data |

* Figures are reported as cited in the particular section of the of the document referenced.

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Pennsylvania

| | 1972 | 1976 (percent) | 1978 |
|---|---|---|---|
| Non-traditional: Total | 3.7 | 9.2 | 9.6 |
| Trades and Industry | 2.9 | 9.0 | 7.9 |
| Agriculture | 3.7 | 9.0 | 10.3 |
| Distributive Education | 0.0 | 0.0 | 24.6 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 8.1 | 10.7 | 18.8 |
| Mixed: Total Gainful & Non-gainful | 50.8 | 65.2 | 63.6 |
| Gainful Only | 50.3 | 65.2 | 63.6 |
| Trades and Industry | 30.5 | 58.2 | 61.7 |
| Agriculture | 49.2 | 64.6 | 65.2 |
| Distributive Education | 61.1 | 59.0 | 61.1 |
| Health | 67.6 | 56.9 | 51.9 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 63.0 | 70.3 | 65.7 |
| Technical | 48.3 | 67.7 | 72.6 |
| Home Economics (Non-gainful) | 68.9 | 42.1 | 55.9 |
| Traditional: Total Gainful & Non-gainful | 91.0 | 85.8 | 86.3 |
| Gainful Only | 89.7 | 88.2 | 90.3 |
| Trades and Industry | 89.5 | 92.6 | 91.6 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 95.6 | 81.9 | 95.2 |
| Home Economics (Gainful) | 73.3 | 76.2 | 75.5 |
| Business | 90.9 | 91.0 | 91.2 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 92.9 | 82.3 | 80.8 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of Pennsylvania Detailed Enrollment Data, 1972 - 1978

### Non-Traditional

Agricultural. The number of all students enrolled increased from 12,500 in 1972 to 18,000 in 1978; the number of women from 450 to 1900. The percent women enrolled in Pennsylvania increased from 3.7% to 10.3%, less than the increase of women enrolled nationally (3.9% to 13.1%). Enrollment of women increased in all courses as was true of national enrollment.

Technical. Pennsylvania's increase in the percent women in Non-traditional Technical courses was similar to the national:

| % Women | 1972 | 1978 |
|---|---|---|
| PA | 8.1% | 19.8% |
| U.S. | 8.6 | 16.7 |

Enrollment of women increased from 1,300 (1972) to 4,700 (1978).

Trade and Industrial (T&I). Although there was a steady increase in the percent of women in Non-traditional T&I nationally from 1972 to 1978, in Pennsylvania there was an increase in the percent of women in T&I between 1972 and 1976 but a decrease between 1976 (9.0%) and 1978 (7.9%).

The enrollment of women expanded continually from 2,800 (1972) to 9,000 (1976) to 11,500 (1978), but this was offset by an even greater expansion of men from 111,000 to 121,000.

Detailed programs. Major increases occurred in:

| | 1972 | 1978 |
|---|---|---|
| Auto mechanics | 5.2% | 8.7% |
| Carpentry | 1.8 | 4.1 |
| Drafting | 3.8 | 13.5 |
| Electronics | 3.8 | 8.5 |
| Management Development | 9.8 | 30.6 |
| Graphic Arts | 10.5 | 31.4 |
| Law Enforcement | 0.4 | 35.4 |
| Woodworking | 9.7 | 20.1 |

### Mixed & Traditional

The percent women enrolled in Mixed courses in Pennsylvania in 1978 (63.6%) was greater than the U.S., and the percent in each training area was greater except in Mixed Health courses.

The total enrollment of women in Mixed courses expanded in Pennsylvania between 1972 and 1978, more from 1976 to 1978 than 1972 to 1976. This was true for each occupational training area.

The percent of women enrolled in Traditional courses did not decrease in Pennsylvania except in Home Economics.

Business

Mixed. Both the percent and the number of women in Mixed Business courses increased from 1972 to 1978. Total enrollments also rose continually, though more slowly from 1976 to 1978. The percent of women increased in each Mixed detailed program except "Office Occupations, Other" by 1978.

Traditional. Enrollment of women in Traditional courses in Pennsylvania increased from 121,000 in 1972 to 160,000 in 1976 and decreased slightly to 153,000 by 1978.

Distributive Education.

Mixed. The pattern established for Mixed Business was true for Mixed Distributive Education. There was a small increase in number and percentage of women in almost all detailed programs except Real Estate, Insurance, and Transportation.

Health

Mixed. The major expansion in women's enrollment in Mixed Health occurred between 1976 and 1978 when it more than doubled (as did total student enrollment).

Trade and Industrial

Mixed. Enrollment of women in Mixed Trade and Industrial dropped considerably between 1972 and 1976 due to a large decrease in enrollment in the "Other Public Services" courses. Enrollment increased again between 1976 and 1978.

Traditional. Enrollment of women in Traditional Trade and Industrial increased rapidly from 1972 to 1976 but hardly at all from 1976 to 1978.

Home Economics. Enrollment of women in Consumer and Home Economics increased from 1972 to 1976 and decreased very slightly from 1976 to 1978. The percent women enrolled decreased throughout the period from 1972 to 1978.

TEXAS

## Summary Analysis

### State Reports

Funds beyond those for the Sex Equity Coordinator and displaced homemakers were allocated by the state, but the actual expenditures were lower than the allocations.

Perhaps the most interesting effort in Texas was the establishment of enrollment goals to be reached each year, although the goals projected minimal gains. Results of these enrollment goals indicated improvement in sex equity in the state, but the only way that the state could accomplish the goals was through performance at the LEA level. However there was no evidence that the state goals had been specifically applied to LEAs.

### Enrollment Data

In Texas percent of women enrolled increased in every Non-traditonal occupational training area, except Trade and Industrial. This was because of a particularly large increase in the number of women enrolled. Texas had major increases of women in Non-traditional courses, including Trade and Industrial courses, that did not have increases in most other states in the U.S.

Women increased in all Mixed occupational training areas, except Mixed Health where men made greater gains. Increases in enrollment of men in courses Traditional for women was almost entirely in Home Economics, and to a lesser degree in Traditional Trade and Industry.

## Analysis of Texas State Reports

### SACVE Recommendations

No sex equity issues were identified.

### Public Hearing Comments

The State Board should make funds availabe to support activities to eliminate sex bias and follow up these activities to ensure that funds so identified are actually spent.

> State response. Funds are available to support activities to eliminate sex bias and sex stereotyping. The law and regulations do not mandate any specific expenditure of funds except the $50,000 to support the functions of the full-time personnel. In FY 1978, $50,000 was allocated; in FY 1979, $60,459; in FY 1980, $66,022. The minimum has been exceeded.

A pilot program should be undertaken to encourage women vocational educators to enter welding; 30 classes for women were started but none of the vocational education teachers were women.

### BOAE Staff Report

State's program of incentives to develop model programs to reduce sex bias is inadequate.

> Required action. Describe incentive package currently available, and insure that LEAs are aware of the program.

Results of activities to reduce sex stereotyping in vocational education by the sex equity coordinator and others are not reported. A list of activities in this area does not adequately comply with the regulations.

> Required action. Rewrite the results section to include what impact these activities had on reducing sex bias, stereotyping and discrimination. Also include the results of the incentive program as well as the results of the displaced homemaker program.

There has been no update of the functions of the Sex Equity Coordinator. A review of self-evaluations required by Title IX was lacking in the description of functions.

> Required action. Update the Five-Year Plan to include in it the list of functions to be performed by the sex equity personnel.

### MERC/Q Findings

No MERC/Q was conducted for Texas.

State Plan

Enrollment goals were established at the secondary, postsecondary, and adult levels. Results of goals for 1979 were reported; new goals for 1980 were established. Goals were established for percent enrollment of men and women in several occupational training areas at secondary, postsecondary and adult levels. The goals for 1980, however, offered little advancement over the results of 1979. (See Goals Table following.)

Program Descriptions

The development of vocational counseling materials for use in the women's support services program. This project resulted in the development of the film "Breakout," which deals with recruitment by counselors.

An analysis of problems as perceived by male students in vocational homemaking education programs in order to improve teaching techniques or curriuculum development. These will be used in a substantial number of secondary and postsecondary classrooms.

Exemplary program for recruitment into non-traditional careers. A project to explore such areas as barriers to entrance into non-traditional careers, useful recruitment methods, and influencing occupational choice. Recruitment materials were developed and recommendations were made for statewide recruitment activities.

Minicourses to explore non-traditional career fields; lab courses to give individuals an opportunity to experience areas of employment previously traditional for the opposite sex.

Utilization of a model to create awareness of sex bias and sex stereotyping in vocational education. This project provided information concerning the effectiveness of the workshop approach to the solution of the problem of sex bias and sex stereotyping.

Training of child care providers to use a nonsexist approach to child development. Material packets were developed including suggested resources and learning activities for developing programs to eliminate sexism.

Priority was given to programs which were designed to reduce sex stereotyping in vocational education and also focused on opportunities in rural areas and for individuals migrating from rural to urban centers with a high concentration of economically disadvantaged, unskilled, and unemployed persons.

Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Sex Bias Support Personnel | $ 50,000 | $ 38,633 |
| Support Services for Women | 300,000 | 9,947 |
| Day Care Services | 500,000 | -0- |
| Displaced Homemakers | 200,000 | 5,739 |
| Exemplary and Innovative Programs | 628,059 | 169,133 |

TEXAS ENROLLMENT GOALS AND RESULTS FOR WOMEN AND MEN - 1979

| | Secondary | | Post-Secondary | | Adult | |
|---|---|---|---|---|---|---|
| | Goals | Results | Goals | Results | Goals | Results |
| Women | | | | | | |
| Distributive | - - - | - - - | 28.6% | 39.9% | - - - | - - - |
| Agricultural | 11.6% | 12.3% | 27.8 | 28.2 | 26.4% | 12.1% |
| Trade & Industrial excluding Cosmetology | 7.2 | 9.2 | 7.2 | 11.1 | - - - | - - - |
| Technical | - - - | - - - | 13.2 | 14.1 | 16.8 | 9.8 |
| Industrial Arts | 12.8 | 15.0 | - - - | - - - | - - - | - - - |
| Men | | | | | | |
| Health | 9.6 | 17.2 | 28.8 | 15.4 | 13.2 | 31.1 |
| Office excluding Data Processing | 23.0 | 23.5 | 18.0 | 18.9 | 4.8 | 35.4 |

TEXAS ENROLLMENT GOALS FOR WOMEN AND MEN - 1980

| | Secondary | Post-Secondary | Adult |
|---|---|---|---|
| | Goals | Goals | Goals |
| Women | | | |
| Distributive | - - - | 40.3% | - - - |
| Agricultural | 13.0% | 29.1 | - - - |
| Trade & Industrial excluding Cosmetology | 11.1 | 12.0 | 13.4% |
| Technical | - - - | 15.2 | 10.1 |
| Industrial Arts | 16.2 | - - - | - - - |
| Men | | | |
| Health | 19.1 | 15.7 | 32.3 |
| Office excluding Data Processing | 13.1 | 30.3 | 27.3 |
| Home Economics | 23.7 | 19.3 | 35.9 |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Texas

| | 1972 | 1976 (percent) | 1978 |
|---|---|---|---|
| Non-traditional: Total | 1.4 | 6.4 | 11.1 |
| Trades and Industry | 2.4 | 5.8 | 6.6 |
| Agriculture | 0.7 | 4.5 | 13.8 |
| Distributive Education | 8.7 | 14.2 | 15.8 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 4.1 | 15.7 | 18.2 |
| Mixed: Total Gainful & Non-gainful | 55.4 | 52.4 | 59.1 |
| Gainful Only | 46.6 | 49.2 | 55.7 |
| Trades and Industry | 34.7 | 34.1 | 49.1 |
| Agriculture | 10.6 | 30.4 | 57.0 |
| Distributive Education | 44.6 | 44.7 | 50.7 |
| Health | 71.6 | 64.9 | 67.2 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 53.0 | 59.1 | 60.7 |
| Technical | 27.7 | 20.5 | 0.0 |
| Home Economics (Non-gainful) | 71.8 | 77.9 | 67.0 |
| Traditional: Total Gainful & Non-gainful | 94.7 | 84.7 | 84.3 |
| Gainful Only | 90.9 | 88.3 | 88.0 |
| Trades and Industry | 95.7 | 85.7 | 87.6 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 89.2 | 90.7 | 90.5 |
| Home Economics (Gainful) | 88.4 | 82.5 | 78.0 |
| Business | 91.9 | 90.7 | 93.0 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 94.3 | 83.4 | 83.0 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Non-Traditional

Agricultural. Increase of percent women enrolled was greater than the national increase:

| % Women | 1972 | 1978 |
|---|---|---|
| Texas | 0.7% | 13.8% |
| U.S. | 3.9 | 13.1 |

Women made a major gain in Non-traditional Agriculture in Texas between 1976-1978, while nationally the shift had already leveled off. The enrollment of women increased from 1,024 in 1972 to 15,622 in 1978.

Detailed programs. Increase resulted primarily because of Agricultural Production, although every program, with the exception of Forestry, showed substantial increases in both percent and number of women enrolled.

Technical. The percent women in Non-traditional Technical courses increased at a more rapid rate than the national:

| % Women | 1972 | 1978 |
|---|---|---|
| Texas | 4.1% | 18.2% |
| U.S. | 8.6 | 16.7 |

The enrollment increased twice as much prior to 1976 as it did after 1976, from 334 in 1972 to 5,367 in 1976 to 8,934 in 1978.

Detailed programs. Most increases occurred in Miscellaneous Technical courses. Other smaller courses in which women made gains between 1972 and 1978 were Architectural, Industrial, and Mechanical Technologies; Fire Stafety; and Police Science.

Trade & Industrial. Increase of percent women enrolled in Non-traditional Trade and Industrial courses in Texas was comparable to national expansion, but Texas started well below U.S. and was still three percentage points below U.S. in 1978:

| % Women | 1972 | 1978 |
|---|---|---|
| Texas | 2.4% | 6.6% |
| U.S. | 5.4 | 9.5 |

Detailed programs. Major increases from 1972 to 1978 were in Other Construction, Drafting, Graphic Arts, Law Enforcement, Machine Shop, and Electronics.

Mixed and Traditional

Business. Enrollment of women in Mixed courses increased 10,000 by 1976 and another 7,000 by 1978. Percentage increase brought Texas up to the national average:

| % Women | 1972 | 1978 |
|---|---|---|
| Texas | 53.0% | 60.7% |
| U.S. | 56.8 | 60.5 |

Distributive Education. Large increase (20,000) in numbers enrolled.

Detailed programs. One-third of the women enrolled in Mixed Distributive Education in Texas were in Real Estate.

Health

Mixed. The rate of decline in the percent women in Mixed Health courses in Texas was comparable to the national decline, but a larger percentage of women remained enrolled in Health courses in 1978 than was true nationally:

| % Women | 1972 | 1978 |
|---|---|---|
| Texas | 71.6% | 67.2% |
| U.S. | 63.2 | 57.7 |

Traditional. 80% of the women enrolled in Traditional Health courses in Texas were in some sort of Nursing. There were higher percentages of women enrolled in Health than nationally.

Trade and Industrial. Rapid expansion in Mixed courses, mainly in Quantity Foods - 27.1% in 1972 to 61.9% in 1978.

Home Economics

Traditional. The reduction in percent women enrolled in Traditional Gainful Home Economics in Texas was greater than the national reduction:

| % Women | 1972 | 1978 |
|---|---|---|
| Texas | 88.4% | 78.0% |
| U.S. | 86.1 | 82.5 |

Total women enrolled in Traditional Gainful Home Economics in Texas continually increased from 8,100 in 1972 to 23,400 in 1978.

# WYOMING

## Summary Analysis

### State Reports

Unlike many other small states that utilized only a portion of the $50,000 allocated for the Sex Equity Coordinator, Wyoming attempted to utilize $21,210 of the $50,000 for programs. The fact that BOAE disallowed some of that allocation should not obscure the state's effort to utilize the full $50,000.

There was nothing in the State Plan to explain why Wyoming made such progress in eliminating sex stereotyping as indicated by the enrollment data.

### Enrollment Data

Extremely positive gains were made in Trade and Industrial Non-traditional enrollment and in Agricultural. Given that a limited number of courses are offered in any state with a small population, Wyoming showed positive enrollment increases above the national averages in all courses offered.

There was an increase of women in Mixed Business courses; in all programs there were exceptional increases.

Men made gains in courses Traditional for women and women made gains in courses Traditional for men. Such uniform increases could not have occurred without effort.

## Analysis of Wyoming State Reports

### SACVE Recommendations

Devise means to achieve more equal sex representation in vocational education training programs.

### Public Hearing Comments

There is a need for supportive services for women in vocational education, day care services for children of students in post-secondary and adult vocational programs, and grants to overcome sex bias and sex-role stereotyping in vocational education.

> State response. There are not enough funds to adequately provide day care services for children of students. Priority was placed on funding the improvement of secondary vocational programming.

### BOAE Staff Report

Projects were funded from the $50,000 allocated for the support of personnel working full-time to carry out the required functions. The second and fourth projects (listed below), however, do not relate directly to the ten functions and as such cannot be funded from the $50,000 required funds.

### MERC/Q Findings

MERC/Q was conducted for Wyoming, but no report was available.

### Program Discriptions

Use of sex bias funds for purposes other than staff are as follows:

> A grant for $2,500 to develop an audio-visual recruitment package for the purpose of encouraging females to enroll in the construction technology program.
>
> $1,500 for guidance and instructional materials for home economics classes which develop career decision-making skills to address the issue of sex-role stereotyping.
>
> $500 to conduct an in-service workshop for district vocational teachers, counselors, and administrators.
>
> $180 to cover workshop expenses for a vocational education teacher to develop skills in helping women overcome math anxiety.

$16,530 to conduct a needs assessment of rural women 15 years and older in a six-county area.

Displaced homemakers. Program funded for exploration, placement, and follow-up.

Budget Data

| Purpose | FY '78 Allocated | FY '78 Expended |
|---|---|---|
| Displaced Homemakers | $ 40,000 | $ 10,000 |
| Sex Bias Personnel | 50,000 | 50,000 |

Women enrolled in Non-traditional, Mixed and Traditional categories* by occupational training area and year, Wyoming

| | 1972 | 1976 (percent) | 1978 |
|---|---|---|---|
| Non-traditional: Total | 3.1 | 12.8 | 12.3 |
| Trades and Industry | 1.2 | 12.1 | 10.7 |
| Agriculture | 3.5 | 13.6 | 18.2 |
| Distributive Education | 16.0 | 33.3 | 47.0 |
| Health | 0.0 | 0.0 | 0.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 0.0 | 0.0 | 0.0 |
| Technical | 8.6 | 10.5 | 7.2 |
| Mixed: Total Gainful & Non-gainful | 57.8 | 64.1 | 56.0 |
| Gainful Only | 57.8 | 61.4 | 53.7 |
| Trades and Industry | 0.0 | 26.8 | 63.7 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 56.9 | 63.1 | 33.8 |
| Health | 0.0 | 0.0 | 89.0 |
| Home Economics (Gainful) | 0.0 | 0.0 | 0.0 |
| Business | 58.3 | 61.8 | 65.1 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 0.0 | 85.5 | 83.8 |
| Traditional: Total Gainful & Non-gainful | 93.5 | 75.3 | 74.8 |
| Gainful Only | 87.9 | 68.4 | 70.3 |
| Trades and Industry | 0.0 | 0.0 | 100.0 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Distributive Education | 0.0 | 0.0 | 0.0 |
| Health | 100.0 | 85.2 | 91.1 |
| Home Economics (Gainful) | 63.5 | 76.1 | 65.3 |
| Business | 88.0 | 67.0 | 70.0 |
| Technical | 0.0 | 0.0 | 0.0 |
| Home Economics (Non-gainful) | 97.4 | 83.5 | 80.0 |

SOURCE: Based on data from U.S. Department of Health, Education, and Welfare, Bureau of Occupational and Adult Education.

* Percentage of women enrolled in vocational education courses nationally, 1972. Non-traditional (NT) = 0.0 to 25%, Mixed (M) = 25.1% to 75.0%, Traditional (T) = 75.1% to 100%.

## Analysis of Wyoming Detailed Enrollment Data, 1972-1978

### Non-Traditional

Agricultural. Percent women enrolled in Agriculture increased at a greater rate than the national:

| % Women | 1972 | 1978 |
|---|---|---|
| Wyoming | 3.5% | 18.2% |
| U.S. | 3.9 | 13.1 |

Total student enrollment expanded from 1,900 (1972) to 2,500 (1978). At the same time the number of women increased from 68 to 450.

Detailed programs. Greatest increases were in Agriculture Supplies/Services, Agricultural Mechanics, Agricultural Products, and Miscellaneous Agriculture.

Technical. Percent women enrolled increased between 1972 (8.6%) and 1976 (10.5%), but by 1978 most of the Wyoming Technical program had been phased out.

Trade and Industrial. Percent women enrolled in Non-traditional Trade and Industrial in Wyoming in 1972 (1.2%) was much lower than the national, but by 1978 (10.7%) was greater than the national.

Total number of women enrolled rose from 16 (1972) to 1,184 (1978).

Detailed programs. In 1972 women were in two courses: Graphic Arts and Drafting. In 1978, they were in twelve courses; most were in Woodworking, Drafting, and Graphic Arts.

### Mixed

Total women enrolled in Mixed courses in Wyoming increased from 1,700 (1972) to 2,100 (1976) and to 3,800 (1978). The major shift in women's enrollment occurred after 1976. This pattern was exactly replicated in Mixed Business and Distributive Education.

Business. Nine out of ten women enrolled in Mixed Business were in Accounting and Computing, in which women's total enrollment doubled between 1972 and 1976, and then again between 1976 and 1978.

Distributive Education. In 1978, percent women in Mixed Distributive Education in Wyoming (33.8%) was substantially lower than the national percent women (52.2%).

Health and Trade & Industrial. Percent women in Wyoming in Mixed Health (89.0%) in 1978 was much higher than the national percent women (57.7%). The same was true of Trade and Industrial (63.7%) which was substantially higher than national percent women (46.7%) in 1978.

There seems to have been no vocational education program available in Mixed Health in Wyoming prior to 1978 and very little in Mixed Trade and Industrial which partially accounted for the high percent of women enrolled once these programs started.

Traditional

Nine out of ten women enrolled in Traditional courses in Wyoming in 1978 were in Traditional Business; enrollment in other courses was negligible.

Home Economics. In Wyoming, percent women enrolled in Traditional Home Economics courses decreased 17.5 percentage points between 1972 and 1978 from 97.4% to 80.0%. The percent women decreased in every course.

## Matrix of Activities Addressed in State Plans 1/

| | AL | CA | FL | GA | ID | IL | NH | NM | NY | OH | OK | OR | PA | TX | WY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1. STATE PLAN REVIEW AND PREPARATION** | | | | | | | | | | | | | | | |
| Review state plan for sex equity | X | | X | X | X | X | X | X | X | X | X | X | X | | X |
| Develop comprehensive plan to overcome sex bias | X | X | | | | X | X | X | X | X | X | | | X | |
| State general commitment to sex equity in state plan | | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Develop and implement state study to eliminate sex bias and sex stereotyping at all levels | | X | | | | | | | X | | X | X | | X | |
| **2. REVIEW STATE GRANTS FOR SEX EQUITY 2/** | | | | | | | | | | | | | | | |
| Review distribution of grants to assure needs of women are addressed | X | X | X | X | X | X | X | X | X | X | X | X | X | | X |
| Review programs funded by state office for sex bias | X | X | X | X | X | X | X | X | X | X | X | X | X | | X |
| Require an evaluation component on each program include elimination of sex bias | | X | | | X | X | | | X | | | X | | | |
| **3. INVOLVE OTHER AGENCIES/INDIVIDUALS/STUDENTS** | | | | | | | | | | | | | | | |
| Establish a State Advisory Council on Sex Equity | X | | | | X | X | | | X | X | X | X | | | |
| Require Local Advisory Councils to include person aware of problems of sex discrimination and bias | | X | | | | X | | | X | X | | X | | | |
| Involve student organizations in non-traditional vocational education | | X | X | | | | | | | | | X | | X | |
| Develop on-site visits to business and industry for non-traditional students | | | | | | | | | | | | | | X | |
| Work cooperatively with other agencies and organizations to eliminate sex bias | | | X | | X | | | | X | X | | | | X | |

1/ The 1980 Plans were analyzed for this matrix from 14 states and the 1979 Plan for Georgia.

2/ Description of programs funded by state for sex equity described separately in each Analysis of State Reports.

| | AL | CA | FL | GA | ID | IL | NH | NM | NY | OH | OK | OR | PA | TX | WY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4. EVALUATE/MONITOR/PROVIDE TA TO LEAs** | | | | | | | | | | | | | | | |
| Provide technical assistance to LEAs | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Evaluate performance of LEAs and funded programs | | X | | | | | | X | X | X | | X | | | X |
| Utilize results of evaluations/and Action Plans in determining state priorities | | | | | | X | | | X | X | X | X | | X | |
| Stimulate locally initiated projects | | X | | | X | | | | | | X | X | | | |
| Review Title IX Evaluations | | X | X | | | | X | X | X | X | X | X | X | X | |
| Develop monitoring tools other than Title IX self evaluation | X | X | | X | X | X | | | | X | X | X | | X | |
| Monitor complaints | | | | | | | | | | | | | | X | |
| Make recommendations to LEAs on affirmative action | | X | | | | | | | X | X | | | | | |
| **5. DEVELOP AND REVIEW CURRICULUM** | | | | | | | | | | | | | | | |
| Review books and materials in use for sex stereotyping | X | X | | | | X | X | | X | X | X | X | | X | X |
| Identify and disseminate curriculum for overcoming sex bias and stereotyping | | X | X | | | X | X | X | X | X | X | X | X | X | X |
| Train curriculum personnel in developing bias-free curriculum | | | | | | | X | | | | | | | X | |
| Provide guidelines for curriculum development and review | | X | | | | | X | | X | | X | | | X | |
| Develop materials which eliminate sex stereotyping | | X | X | X | | X | X | X | X | X | | | X | | |
| **6. REQUIRE ASSURANCES FROM LEA, PRIOR TO FUNDING** | | | | | | | | | | | | | | | |
| Require LEAs to provide assurances that programs will be conducted to reduce discrimination and sex stereotyping | X | X | | | | | | | X | X | | | | X | |
| Require a plan to eliminate sex discrimination and sex stereotyping | X | X | | | | | X | X | X | X | X | X | | | |

| | AL | CA | FL | GA | ID | IL | NH | NM | NY | OH | OK | OR | PA | TX | WY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Require that LEAs actively recruit men and women for non-traditional programs | | X | | | | | X | X | X | X | | | | | |
| Require submission of an accountability report on the progress of eliminating sex bias | X | X | | | | | | | X | X | | | | | |
| Establish goals and timetable for eliminating sex bias | | X | | | | | | | X | | | | | X | |
| Require that all occupational institutions have an affirmative action plan | | X | | | | | | | X | X | | | | | |
| Disseminate information on administrative jobs and women applicants in order to fulfill affirmative action plan | | | | | | | | | X | | | | | | |

7. ESTABLISH A SYSTEM OF INCENTIVES TO LEAs TO INCREASE PARTICIPATION IN NON-TRADITIONAL VOCATIONAL TRAINING PROGRAMS

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fund conferences | X | | | | | | | | | | | X | | | |
| Provide T.A. | X | | | | | | | | | | | | | | |
| Publicize LEAs with model programs | X | | | | | | | | | | | | | | |
| Propose funding of LEA model programs | | X | X | X | X | X | X | X | X | X | X | X | | | X |

8. DISSEMINATE INFORMATION THROUGH WORKSHOPS, TRAINING, MATERIALS, MEDIA

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conduct in-service and pre-service workshops for state staff, local voc. ed. teachers and administrators, counselors, civic and community groups | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Prepare and distribute informational publications and news releases, radio and TV releases | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Develop Teacher Training Institute(s) to provide awareness programs for vocational teachers, civic groups, state staff, etc. | | X | X | | X | X | | | X | X | X | X | | X | |
| Develop resource packages to assist LEAs in implementing inservice training to eliminate sex stereotyping | | X | | | | X | | | X | X | | | | | |

| | AL | CA | FL | GA | ID | IL | NH | NM | NY | OH | OK | OR | PA | TX | WY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **9. ADDRESS RECRUITMENT, ENROLLMENT, AND PLACEMENT PROGRAMS** | | | | | | | | | | | | | | | |
| Develop recruiting material | | X | | | | | | | | | | | | X | |
| Undertake special recruitment efforts to attract men and women into non-traditional training | | | | | | | | | X | X | | | X | X | |
| Improve placement of men and women in non-traditional jobs | | | | | | | | | X | X | X | | | | |
| Require that LEAs actively recruit men and women for non-traditional programs | | X | | | | | X | X | X | X | | | | | |
| Encourage female enrollment in industrial arts | | | | | | | | X | | | | | | | |
| **10. ELIMINATE SEX ROLE STEREOTYPING IN CONSUMER AND HOMEMAKING EDUCATION** | | | | | | | | | | | | | | | |
| Prepare students for dual role as homemaker and wage earner | | | | X | | X | | | | X | X | | | X | |
| Develop curriculum for dual role and changing patterns | | | | | | X | | | | | X | | | | |
| Provide inservice training to consumer/homemaking teachers | | | | | | X | | | | | X | | X | X | |
| Increase enrollment of men in homemaking | | | | | | X | | | | | X | | | X | |
| Increase offerings of homemaking to men and women at the secondary level | | | | | | | | | | | X | | | | |
| Provide parenthood education to men and women | | | | | | X | | | | | X | | | X | |
| Improve quality of family life courses | | X | | | | | | | | | X | X | | X | |
| Prepare men and women to work in the home | | | | | | X | | | | | | | | | |
| **11. PROVIDE SUPPORTIVE SERVICES TO STUDENTS** | | | | | | | | | | | | | | | |
| Determine need for child care services | | X | | | | | | | X | | X | | | | |
| Provide day care services to students | | | | | | | | | | X | X | X | | | |

| | AL | CA | FL | GA | ID | IL | NH | NM | NY | OH | OK | OR | PA | TX | WY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Provide counseling, special services and job placement for teenage parents, women returning to the labor market, single heads of households, and homemakers who work part-time and desire full-time employment | | X | | X | | | | | | | | | | | |

12. MISCELLANEOUS

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prohibit discrimination in hiring and firing, and interview practices | X | X | | | X | X | X | | X | X | X | X | X | | X |
| Gather, analyze, and disseminate data on students and employees | X | X | | X | X | X | X | X | X | X | X | X | X | | X |
| Require knowledge of sex equity for state certification (pending) | | | | | | | X | | | | | | | | |
| Emphasize non-sex role stereotyping in career education | | | | | | | | | X | | | | | | X |
| Encourage women's involvement in apprenticeship | | X | | | | | | | | | | | | X | X |

Appendix F

Common Elements of Successful Sex Equity Programs

Volume 3 of the Vocational Education Equity Study referenced in Section III. of this report describes case studies and promising approaches for achieving sex equity in vocational education. The following guidelines for replication describe the common elements of the successful programs analyzed for that study:

> "The case study programs have developed to meet needs in their own settings and they represent a variety of approaches for fostering greater sex equity. However, all of the programs have features in common and it is these features which appear to be important to successful replication. Briefly, the approaches which seem key to success are as follows:
>
> - Establish liaison with employers. The developers of virtually all the case study programs felt that this was of primary importance. Since employers hold the ultimate key to the success of any training, it is vitally important to gain their cooperation and support of the program. Several methods for doing this are described in the case studies.
>
> - Provide a thorough orientation to the program. It appears to be essential for program participants to have a clear idea of what the program itself entails and a realistic picture of the job market they will enter. Such orientation allows programs to work with participants who are motivated and serious about the training they are to receive. Because this is such an important consideration, the entire content of several programs was designed to provide an orientation to nontraditional career options.
>
> - Obtain full support from and integration with the host agency. This recommendation applies particularly to programs hosted in community colleges. Developers felt the programs must be perceived as completely integrated into the structure of the college rather than as an "add-on" feature. This gives the program more visibility and clout with the community at large and potential participants in particular.
>
> - Provide necessary support service to participants. Many programs felt that a key ingredient of their success came from offering supportive counseling services to clients. Individuals enrolled in nontraditional programs may need additional encouragement and support when striking out on an untraveled path. Re-entry women also often encounter family problems and other pressures associated with returning to school or the labor market. All programs emphasized the value of making use of existing services rather than duplicating efforts.

- Carefully plan and evaluate the program. A successful program must have a clear idea of what it hopes to achieve, and a way of measuring whether it is achieving it. Evaluation results provide the necessary feedback for making improvements. Following up participants once they have left the program was frequently mentioned as the most useful source of evaluation data.

- Hire competent, dedicated staff. This is obvious but vitally important. The particular qualities of staff which appear to be important for equity programs are:

  - A genuine commitment to sex equity

  - Knowledge of the labor force, particularly in the local area

  - An ability to serve as a role model for participants. Staff must understand that lack of experience or knowledge can be corrected through learning, and they must be willing to provide support to participants.

An essential feature of all programs which were identified was a realization that simply stating that all occupational training areas are open to both sexes is not enough. More exposure of programs and support of nontraditional enrollees are needed for things to be truly equal. Successful programs are designed to provide this exposure and support."[1]

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[1] American Institute for Research, The Vocational Education Equity Study, Volume 1: The Primary Data, Laurie R. Harrison, et. al. April, 1979, pp. 396-397.

## Appendix G

### WITNESS LIST

Following are the witnesses who formally participated in the Eastern and Western Hearings on Increasing Sex Equity in Vocational Education.

### Eastern Hearing

State Profile

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A Perspective from Persons Outside the Vocational Education System

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Jackie Potter
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Special Needs of Minority Women

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Marcella Maxwell
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Medgar Evers College
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Western Hearing

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